

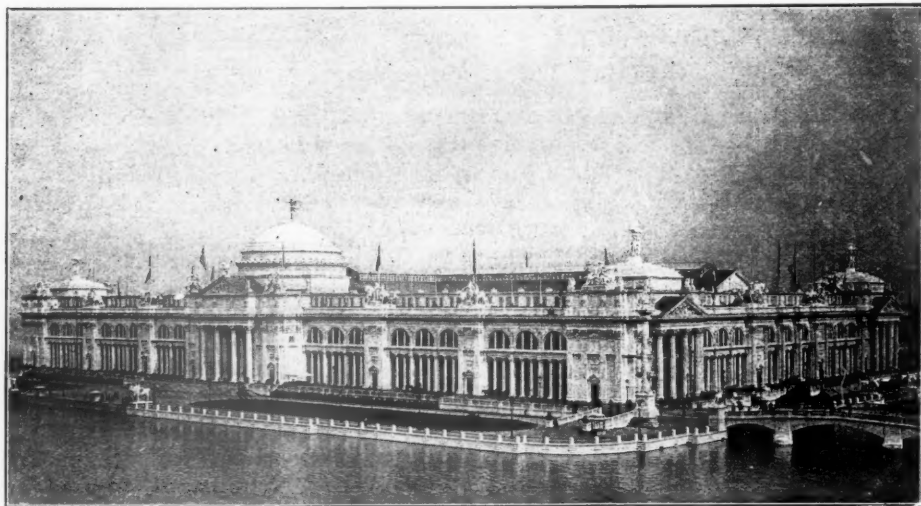
THE WORLD'S FAIR BUILDINGS, CHICAGO. By the Hon. Secretary,
WILLIAM EMERSON, Member of the Jury for Architecture on
behalf of the United Kingdom.

ON being asked by the Royal Commission for the British Section of the Chicago Exhibition to act as Judge in Architecture on behalf of the United Kingdom, I forthwith accepted the offer, and proceeded to America early in July. Arrived at Chicago, I suffered my first journey to the World's Fair by elevated railway, amid the greatest discomfort. Americans appear to think a train never can be full, for the overcrowding was intolerable, and the heat positively appalling. Duly reporting myself to Sir Henry Wood at Victoria House, I at once commenced my duties by joining the General Arts Committee, under the chairmanship of Mr. H. W. B. Davis, R.A., and for nearly three weeks was occupied in the work of the committees and in adjudication. So much time was thus taken up that quite half the exhibits were left unexplored; but, considering that the area covered is four times larger than any of the Paris Expositions, and that the heat ranged from 95° to 103° in the shade, this can hardly be wondered at.

The first entry into the Fair grounds was bewildering. The authorities seem to have thought that people would instinctively find their way about, and but few attendants were provided; it took at least three days to learn the geography of the place. The grounds cover an area of 650 acres, and two hours of diligent inquiry and walking were consumed, the first morning, in the attempt to find my way to the British Government building.

The World's Fair buildings are situated in Jackson Park, some eight or nine miles from the centre of Chicago, and extend two miles along the shore of Lake Michigan. The view from the lake, with the fine peristyle which separates it from the large lagoon, and the groups of State buildings, of which the most conspicuous is the German house, are as charming and effective as can well be conceived. The buildings are generally white, with a judicious introduction of coloured decoration, and the whole, with the water and the trees, has a most grandiose and picturesque effect. The ground on which the Exhibition is built was originally a swamp; and, by a happy inspiration, Mr. Ormstead, the landscape gardener, who planned the Central Park at New York, and to whom was entrusted the laying out of the grounds, took advantage of the swampy nature of the place and the near proximity of Lake Michigan, and proceeded to excavate a series of lagoons to be fed from the Lake, the material thus obtained being used to raise the level on which the buildings were to be erected. These lagoons, round which they are ranged, besides vastly enhancing the

artistic effect of the whole, supply a means of locomotion by electric launches and gondolas to the principal points of interest; and sailing about on them formed the most delightful method of seeing the architectural display, both by day and when illuminated at night, and was, indeed, the most enjoyable thing to be done, reminding one of getting about in Venice. The largest buildings, or rather palaces, are situated on either side of two lagoons crossing each other at right angles, the larger being some thirteen or fourteen hundred feet long by about three hundred feet wide, the other being longer but not so wide. All these lakes are surrounded by fine terraces, with ornamental balustrades and statuary and flights of steps. The Administrative block stands at one end of the larger of these basins, and at the other is a fine peristylum connecting the Music Hall and the Casino. On one side are the buildings for the exhibits of Manufactures and Liberal Arts, Electricity, and Mining, and on the other side those for Agriculture and Machinery. The effect of these groups is undoubtedly finer than anything ever before done in the way of temporary buildings for exhibition purposes; and presenting the appearance, as they do, of a series of very substantial and magnificent white

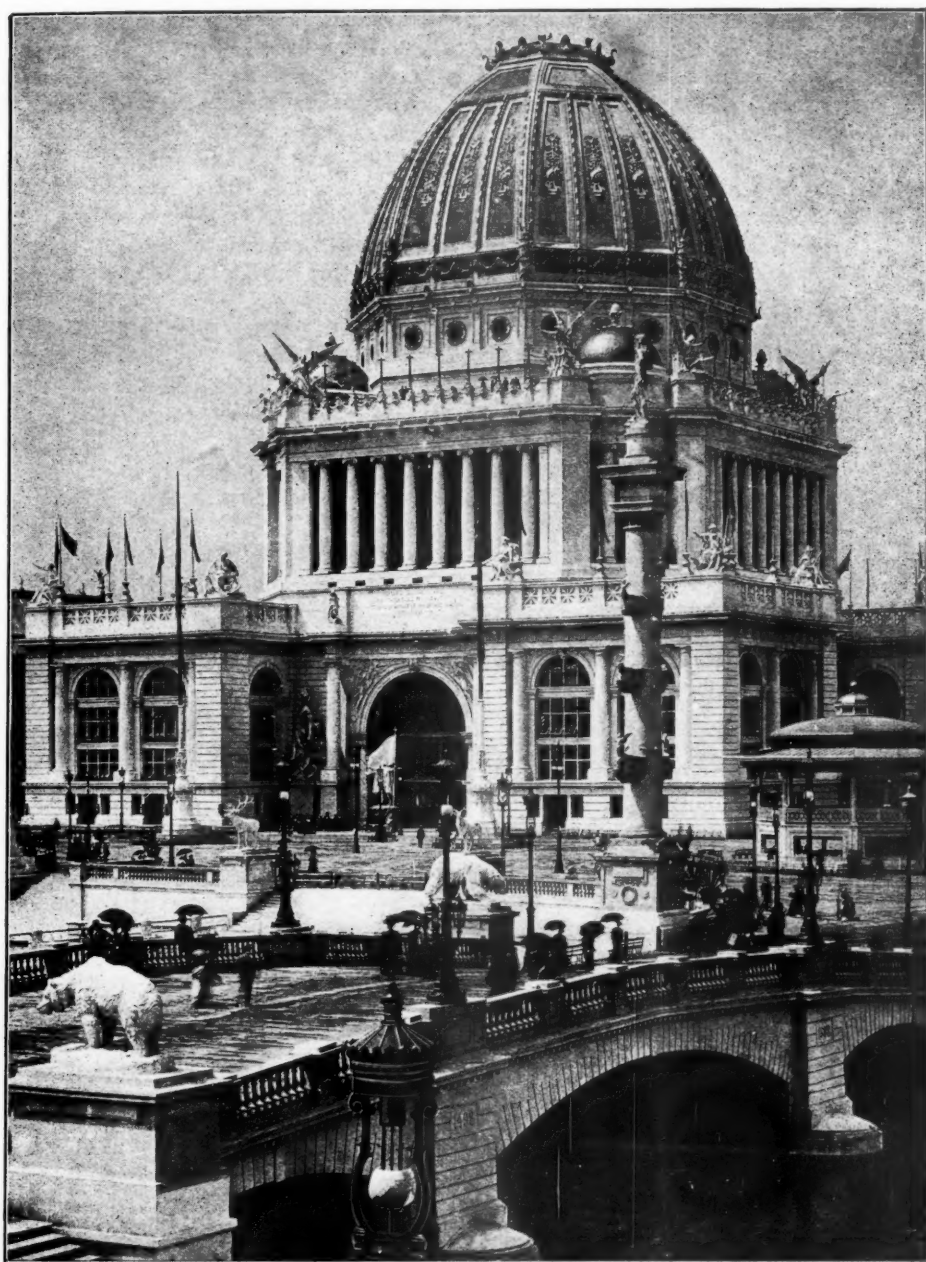


THE AGRICULTURAL BUILDING.

marble palaces of fine design, the mind is completely divested of any idea of their temporary character [see General Plan, p. 71].

The Agricultural building, designed by Messrs. McKim, Meade & White, of New York, is a very striking and well-thought-out composition. It is eight hundred feet long by five hundred feet wide, and has centre and corner pavilions, the centre one being surmounted by a large low dome one hundred feet in diameter and one hundred and thirty feet high. The Order occupies, with its entablature, which is Corinthian, the whole height of the building, and each wing between the centre and corner pavilions has three bays, filled by smaller columns and entablatures, with arches over. The whole is richly ornamented with sculpture. The groups representing agricultural subjects are exceedingly well designed and executed, the horse and cattle groups by Philip Martiny, of Philadelphia, being especially good.

The general scheme, as stated above, was first planned and the grounds were laid out



THE ADMINISTRATION BUILDING. FROM A PHOTOGRAPH PRESENTED BY THE ARCHITECT, MR. RICHARD M. HUNT,
Hon. Corr. Member (Royal Gold Medallist 1893), *Correspondant de l'Institut de France*.

by Mr. Ormstead; then about ten of the best American architects formed themselves into a committee to arrange for designing the various palaces and to settle the style and scale of the buildings. They appear to have decided first on classic architecture, and then on a general height of about sixty or sixty-five feet for the façades, so that the cornice lines range all round, thus securing a harmony of proportion throughout. Each member of the committee then took in hand the designing of one of the buildings; and when the sketch was prepared it was submitted to the general committee and discussed in the absence of the author; the criticisms of the committee were then made known, and the design had to be altered, if necessary, in accordance with the general opinion. Certainly the outcome of this very sensible arrangement has been most satisfactory from an artistic point of view. A general harmony pervades the whole; the buildings are well in scale and keeping with each other, grand in proportion and of fine design; and the view of them from the lagoons was well worth going such a long way to see. The architect who is director of the Exhibition works, and who was solely responsible for their construction after the various designs were prepared, is Mr. Burnham, of Chicago, recently elected President of the American Institute of Architects, a most popular and charming man, genial companion, and clever constructive architect. The late Mr. Root, to whom was due, I believe, the first artistic inception of the Exhibition scheme, was his talented partner.

The Administrative block, by Mr. Richard M. Hunt, the design of which was shown at the Royal Institute some time back, is somewhat after the plan of the Taj Mahal at Agra, and internally is an octagon of grand proportion, surmounted by a dome 200 feet in height. The decorative painting in the cupola is not as effective as it might have been; the Arts and Sciences are represented, but the filling in of the spaces is insufficient and the colouring weak. The exterior effect is marred somewhat by the want of height and dignity of the four corner subsidiary domes, which are overpowered by the enormous groups of sculpture in front of them; also the lower stage and cornice appear weak and wanting in massiveness, and the abrupt finish to the large dome is unsatisfactory. One cannot help thinking that a little more care and forethought, a closer study of the Taj itself, might have rendered it easily the finest group of all. While referring to Mr. Hunt, I would mention the numerous expressions of gratification I heard from American architects at the fact of the Royal Gold Medal of the Institute being awarded to him this year. There is genuine pleasure among them that he should have been chosen as the recipient of this honour, and the feeling is general among American architects that no fitter selection could have been made. The various specimens I saw of his work left the impression upon me that he was indeed *facile princeps* in his art.

It is impossible to describe in detail the numerous palaces and State buildings at the Exhibition, nor had I time to study them sufficiently to do so; but a few notes of the principal ones may be of interest. On the east of the Administrative block is the Machinery building, designed by Messrs. Peabody and Stearns, of Boston, and it is one of the most picturesque and interesting groups. It is of the Corinthian Order, and is 850 feet long and 350 feet wide. The roof is in three spans of arched iron trusses. The corners have very graceful domed pavilions, and in the centre of each front, facing the lagoons, are the main entrances, with porticoes flanked by towers. Between the centre and corner pavilions are loggias, the walls at the back being handsomely decorated and of a rich yellow tone, producing a very charming effect with the columns standing out in relief against them. The lightness and freedom of the composition form a pleasing contrast to the stately severity of the other palaces.

The Manufactures and Liberal Arts Palace was designed by Mr. George B. Post, of New York. It is the largest of all the edifices in the Exhibition, being 1,687 feet long and 787 feet



VIEW LOOKING NORTH—MACHINERY BUILDING ON THE LEFT. [See General Plan, p. 71.]

wide; the height of the roof over the central hall is 245 feet 6 inches, the span of the steel trusses being 364 feet in the clear. The Order is Corinthian, the design having a broad and

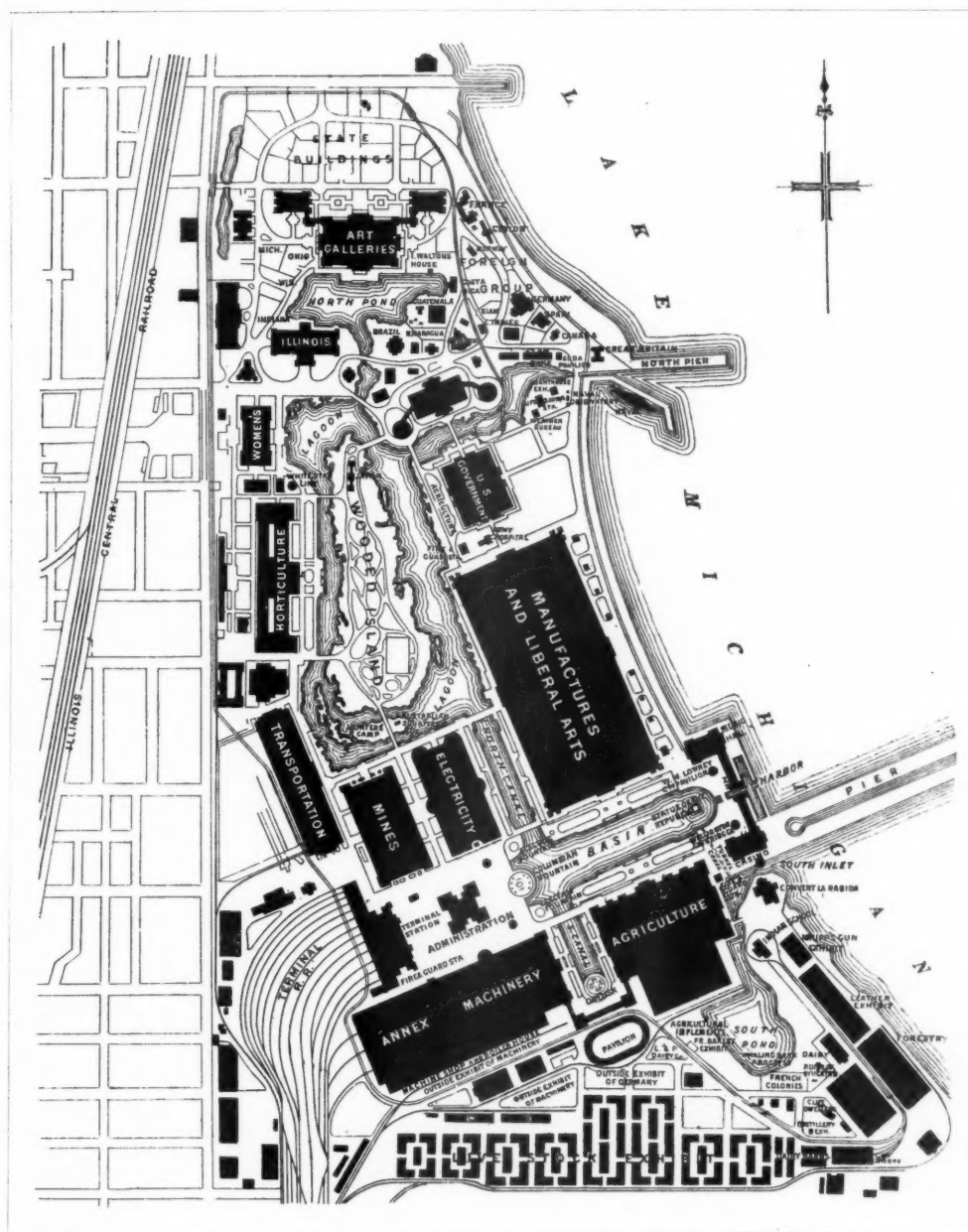
severe effect. The Main Entrance Pavilions are 172 feet high, in the centre of each façade having arches 80 feet high and 40 feet wide, flanked on either side by enormous columns and entablatures; at each corner are entrance pavilions, somewhat smaller and simpler in design. The bays of the façades are formed of a range of single columns and arches with cornice over.

The Electricity Palace was designed by Mr. Van Brunt, of Kansas City; it is 690 feet long and 345 feet wide. The façades are treated with Corinthian pilasters all round, each bay thus formed having a lower tier of two openings with columns, surmounted by a lunette forming the upper tier of windows. The plan of this building differs from most of the other palaces in having a distinctly accentuated nave longitudinally crossed by a transept of similar width and height. The entrances are in the centre of each façade, that facing the Administrative block having a large arched hemicycle forming a porch elaborately painted and decorated, the other being the usual sort of portico. The towers at the corners of the building, and on either side of the portico in the centre of the long façades, are feeble in outline and inferior in detail, which somewhat spoils the effect. These, I understand, were not in accordance with the original design, the architect having to reduce and simplify them owing to some weakness in the foundations.

The most effective scene around these large buildings by the lagoons is the view of the Music Hall and the Casino with their connecting Peristyle. The colonnade is 234 feet long each side of the central water gate or portico to Lake Michigan. The Music Hall and Peristyle were designed by Mr. Atwood, of Chicago, who is also responsible for the Art Galleries; and for grandeur, simplicity, and true artistic feeling these works take rank before any other buildings in the Exhibition. Each of the columns of the Peristyle is surmounted by a figure representing the various American States, and over the water gate is placed a quadriga representing the triumph of Columbus on his return from his first voyage; these are all very excellent works, good in pose, composition, and drapery, the sculptors being Mr. D. C. French and Mr. E. C. Potter. In front of the Peristyle facing the Administrative block, which is at the other end of the large basin, stands a colossal figure of the Republic in gilt and ivory. It is sixty-five feet high, and reposeful in attitude and composition, though, owing to the lines of the drapery, it has rather a stiff and mechanical effect.

The foregoing are the principal buildings forming the chief groups around the main basins; but besides these, in a different part of the grounds, and also by the side of another lagoon, are the Art Galleries, 500 feet long by 320 feet broad, with two annexes, each 200 feet by 120 feet. This building, which, as stated above, is by Mr. Atwood, is of the Ionic Order, very simply and severely treated. It is decidedly the most important piece of work in the Exhibition, and is the only building not to be destroyed; eventually, I believe, it is to be faced with marble. It was, of course, well built and fireproof, and has on either façade a centre portico surmounted by a pediment, with a frieze and a single figure over each column, and small corner pavilions with pediments; the wings are formed of open loggias used as promenades. This building has a longitudinal nave, and cross transepts 100 feet wide, roofed at the intersection by a dome sixty feet in diameter.

The Mining building, the Transportation and Horticultural palaces, and the Fisheries building are situated on various lagoons, and, with the exception of the Transportation building, are worthy of high praise. The Transportation building is very elaborately decorated, and its "Golden Porch," as it is called, has ornamentation like gigantic silver and gold filagree work with figures and foliage, while in the spandrels between the arched heads of openings of façades are grotesque and ugly conventional winged allegorical figures, in colour, and out of scale. The architects are Messrs. Adler & Sullivan, of Chicago. It is the only



GENERAL PLAN OF THE EXHIBITION.

building not in keeping with the others. The Fisheries building is a very picturesque group in Romanesque. The Women's building is Italian, but commonplace and feeble throughout. As

to the various State buildings, they are for the most part picturesque, handsome, and interesting. Those of New York, Pennsylvania, and Ohio are stately and fine compositions; while those of Iowa, Indiana, and California are very picturesque, particularly the last. The Illinois State building was with common consent considered the ugliest and most pretentious; and, curiously enough, it was the only one for which competitive designs were obtained. The German building, a picturesque design, in florid Gothic of the German Renaissance period, and very freely treated, is situated on the lake shore, and is the most imposing of the Foreign headquarters, the walls being painted with allegorical figures and subjects. Its turrets and bell tower and high-pitched gabled roof and balconies render it by far the most telling object from the lake view; and its exhibit of books and relics was one of exceeding interest. Many of the smaller buildings were well worth inspection, but as there are about sixty or seventy, apart from those in the Midway Plaisance, which contains probably another forty, it is as impossible to describe them as it was to see them all properly in the unendurable heat and limited time at my disposal. Many of the architectural exhibits were very charming, such as Old Vienna, the Moorish Palace, the Street in Cairo, and the Persian and Japanese villages.

Doubts were expressed by a number of artists as to the bulk of the work having been designed and executed by Americans, seeing that it is so infinitely superior to anything done in the general buildings of the large towns. But this, I think, is easy of explanation. Most of the large buildings are simply façades to the huge iron and glass roofs, and it is certainly much easier to make an academical design for a large frontage, unhampered by the numerous rooms, storeys, and cross-walls, with nothing much to think of beyond the artistic effect, than it is to design a fine front to a public monument or business building while harassed by all sorts of conditions and requirements. Moreover, the wisdom of the arrangement whereby the designs were submitted to the criticism of a committee of the best men, who were responsible for the ordering of the style and scale, prevented many incongruities. Architects, sculptors, and painters all worked together on the spot, and hand-in-hand, with the happiest results; and from what I heard, they appear to have had a most delightful time together over their work. Much of the sculpture was really magnificent; the groups and figures of the Peristyle and the Agricultural building, and the animals on the bridges, were beautiful. No doubt Monsieur Grandin, of Paris, and other Continental sculptors had a considerable influence and voice in what was done; but the great bulk was, I understood, the work of Americans only. The decorative painting, which was well restrained, and for the most part very effective, was under the direction of Mr. Frank Millet. One point I noticed was, that in the enormous loggias, where the back walls were yellowish in tone, the effect in the strong light was infinitely more happy and joyous than where reds and darker colours had been used, with the idea, I suppose, that the columns would tell out more against such backgrounds. That in the general conception there should be such originality of plan, self-restraint, and real artistic feeling, affords evidence of good training and good taste for which we in this country have hardly given our cousins on the other side of the Atlantic sufficient credit.

Perhaps the most notable structure, but hardly to be included in the above category, is the Ferris Wheel, a gigantic piece of ingenious engineering, and wonderful in construction. It is 250 feet in diameter, and 28 feet 6 inches wide. Around the periphery of the wheel, which is like that of a huge double bicycle, are slung thirty-six cars, each capable of holding sixty persons, forming a kind of huge merry-go-round, each revolution taking about twenty minutes, —and of about as much utility as the Eiffel Tower. The wheel is worked by powerful engines, and the axle is some hundred and forty feet above the ground, being supported by enormous steel towers something after the manner of Eiffel's construction in Paris. It is

conspicuous from every point for miles around, and from the top there is a magnificent view of all Chicago and the lake, the States of Wisconsin, Indiana, Illinois, and Michigan being clearly visible on a fine day.*

Chicago itself is a long, straggling town occupying some sixteen or eighteen miles of the flat southern shore of Lake Michigan. The view of it from the lake is fine and imposing, the principal buildings standing out well, owing to their great height, which averages from ten to twenty storeys. The lake front is utterly spoiled, however, by the fact of the railways running along the foreshore, and intervening the whole length of the town between the chief street and promenade and the water; it is as though King's Road, Brighton, were set back a quarter of a mile from the sea, and the termini of all the railways were situated on the beach. As to the architecture of Chicago, or of New York for the matter of that, I cannot say that there is much to particularly admire in it, though if we put our two new streets, Shaftesbury Avenue and Charing-Cross Road, in comparison, the Americans would, without doubt, have much the best of it. Their buildings for the most part strike one as ponderous and coarse, even private villas having the appearance of being built to resist a bombardment; and the detail, as a rule, is very inferior. One sort of conventional foliage ornament, fairly good in itself, having found favour at first, has been done to death, being introduced in scale and out of scale, appropriately and inappropriately, in numberless buildings from the Auditorium Hotel and Theatre to the smallest villa. In spite of this, however, the buildings are very interesting; for, by striving after the solution of modern problems, unhampered by the trammels of school and precedent which have exercised so baneful an influence on ourselves in the progress of our architecture, the Americans seem to be gradually evolving a style which, when refined, and toned down with more artistic perception, may become both fresh and effective.

Through the kindness of Mr. Burnham and Mr. Atwood, I had the opportunity of examining the arrangement and construction of some of the enormous buildings running to twenty or more storeys high. The floors and internal walls are supported by a skeleton construction of steel and iron, with fireproof casing, the external façades being faced with masonry. These skeleton frameworks are cross-tied and wind-braced in every direction. The buildings themselves, interesting and clever as they are from an engineering point of view, are, as a rule, very ugly from an architectural one. The Masonic Temple, containing groups of offices twenty-four storeys high, has a central entrance hall the height of the whole building, with one end formed by three sides of an octagon, around which are ranged fifteen lifts, some only being express to the top floors. This hall has a skylight at the top, and gives one the impression of looking up from the bottom of a well to the opening at the surface. One of the most interesting buildings I went over is the new Athletic Club, which has a good Venetian Gothic façade facing the lake. On the ground floor is an entrance hall, with a large swimming-bath and dressing-rooms; on the first floor a large bar, a number of billiard tables, and a handsome room, then unfinished, to form eventually a library or drawing-room, were arranged; on the second floor there was a large gymnasium fitted up in the most complete manner; on the third floor were dining-rooms and kitchens, and on the top floor

* Some very excellent views of the more important of the Exhibition buildings may be seen in the various American journals in the Institute Library, notably in *The American Architect*, vol. xxxviii. No. 876 of which contains the Washington State Building; No. 878, the Fine Arts Gallery; No. 884, the Chocolate Pavilion; No. 887, the Transportation Building; No. 916, the Spanish Government Pavilion; No. 925, the British Government

Building and Illinois State Building; vol. xli. No. 926, a Design for a Café; No. 928, the Fisheries Building and Comparative Plans of Exhibitions; No. 931, the Arch of Peristyle. Vols. xxi. and xxii. of *The Inland Architect* contain a series of plates, most exquisite productions, representing the various buildings and grounds of the Exhibition. The Minnesota and Illinois State Buildings are well depicted in *The North-Western Architect*, vol. xi.

tennis and racquet courts; and all this in a house with a frontage in a terrace. The result of crowding such enormous buildings on a small area is, that on a fine sunshiny day, looking from the lake, the city has always a dense pall of black smoke overhanging it. I learned that the height for building has lately been limited by law to sixteen storeys, or 150 feet, and I should not be surprised if in the near future it is found that this concentration of business buildings in the centre of the city is a mistake; and that the authorities will take steps to spread them over a wider area. But the chief difficulty now exercising all minds is how to get rid of the World's Fair temporary palaces, and the last suggestion is to burn them, as pulling down would entail vast expenditure.—WILLIAM EMERSON.

DISCUSSION OF MR. FALKENER'S PAPER ON THE GRECIAN HOUSE
AS DESCRIBED BY VITRUVIUS: THE AUTHOR'S REPLY.

MR. PRESIDENT AND GENTLEMEN,—

With regard to the House, I am grateful to my friend Mr. Penrose for his amiable approval of my interpretation of Vitruvius. I show the Posticum in my plans; but I did not refer to it, as it is not a point of difference between the Grecian and the Roman houses, and therefore was foreign to my subject; and it should be remembered that I am describing the Grecian house in the time of Alexander, and not of Homer, though I refer to that early period.

As to the Hypæthron, I have no doubt upon the subject; and I see nothing in the discussion to shake that opinion. Only the same argument is brought forward again and again that the chryselephantine statue would be injured by the rain; but I point out, at the end of my Paper, that this opening *might be forty feet distant from the statue*, as you will see by examining the plan of the Parthenon; so, as I said, that objection falls to the ground. But it will be said that though the rain might not fall on it, the rain falling even in a distant part of the cella would injuriously affect the statue. I do not think so. As my friend Professor Aitchison reminds us, Pausanias says the statues were liable to over-dampness, and were oiled; and to over-dryness, and were damped. As an illustration of this, when I built my boat-house, the large doors in front were made of open woodwork, in a reticulated form, in order that the damp sea-air might come in, and thus prevent the timbers from shrinking and to require caulking in the next season. As for "deluges" of rain occasionally, the Greeks and the Romans had open roofs to their aule and atrium; and yet we never read any complaints about the inconvenience of deluges.

In one point, however, my friend Aitchison inadvertently makes a mistake; for he makes me answerable for an opinion I do not hold. He says: "We must accept Vitruvius's statement that there were such things as hypæthral temples. . . . Mr. Falkener, however, is the exponent of an entirely different theory; he contends that if Vitruvius says there were hypæthral temples,

"and does not say how temples that were not hypæthral were lit, it is evident that all temples were hypæthral, but I for one do not think that this conclusion is logical."

I do not say anything of the kind; indeed, I maintain the contrary. It was only some, and not all, even of the great temples which were hypæthral, and none of the smaller ones; and all the other temples were lit only by the door, as regards the light of day, though they were lit artificially by lamps and candles, as we see in Greek and Roman Catholic countries; while the Egyptian temples must have depended (I mean the inner portion of such temples) entirely upon this artificial light. And I believe these Greek temples which were not hypæthral were very similar to the ancient Greek churches I have seen in Russia. The inner portion of the church is held to be like the Holy Place of the Jewish temple, and is partitioned off by the Iconostasis. The cathedral church of Kieff is very small, and the screen takes off the greater portion of it, so that the remaining space is not large enough for the whole of the congregation, and many of the worshippers remain outside. Just so in the ordinary Greek temple it is probable that the great majority of the people were outside; and as, in both Greece and Rome, they went to the temple the first thing in the morning, the effect must have been very imposing for all the people outside, and it must have increased the mystery and awe by keeping them outside, to behold the god or goddess lit up by unseen lamps and the golden rays of the rising sun. This, I believe, was the case with most of the ancient temples; but it was *in contrast* to these temples that Vitruvius says that some of the great temples were hypæthral, and I therefore beg to hold to my opinion and to accept Vitruvius as my authority.

Thus you will see that I and my critics are not so much at issue as it appears; for I have not been speaking of Greek temples in general, but of hypæthral temples; and my critics, therefore, must speak of hypæthral temples, and not of other temples.



CHRONICLE.

THE PRELIMINARY EXAMINATION.

The President reported to the Business General Meeting of the 4th inst. that 84 persons had been admitted to the Autumn Preliminary Examination of pupils and others desirous of qualifying as Probationers. Of these, thirty-one were examined in London, nine in Manchester, one did not attend, and forty-three were exempted from attendance; the certificates and drawings submitted by the last-named being sufficient evidence of their qualifications. Of the forty examined, four were relegated to their studies in all subjects of the examination, and five in part. One did not pass. The remaining thirty passed; and they have been registered with the forty-three exempted candidates as Probationers, namely:—

- ABBOTT: Thomas Ernest; St. Leonards House, East Sheen [Master: Mr. E. Dewar Mathews].
 ARMITAGE: John Basil; care of Mr. B. Tower, Sedburgh R.S.O., Yorkshire [Sedburgh School].
 BAXTER: Albert Ernest; 4 & 5, Market Place, Willenhall [Master: Mr. M. Johnson].
 BOUGATSOS: Christos [Greece]; 30, Bedford Place, Russell Square, W.C. [Master: Mr. Edwin T. Hall*].
 BRUMELL: George; 15, Bridge Street, Morpeth [Masters: Messrs. Hicks & Charlewood*].
 BRYER: Alfred; Quarndon, Derby [Master: Mr. T. E. Lidiard James*].
 CARDEN: Robert Walter; 32, Leinster Square, Bayswater, W. [Master: Mr. W. A. Pite*].
 CASTLE: John George; Cleckheaton, Yorkshire [Master: Mr. Reuben Castle*].
 CHARLES: Bessie Ada; 7, Upper Wimpole Street, W. [Master: Mr. Ernest George*].
 CHARLES: Ethel Mary; 7, Upper Wimpole Street, W. [Master: Mr. Ernest George*].
 CLARK: Clement Wightman; Sharon, Rotherham, Yorkshire [Masters: Messrs. Flockton* & Gibbs*].
 CLARK: Frank Adams; 43, Torrington Place, Plymouth [Master: Mr. H. J. Snell].
 CLARK: John; 3, Chandos Street, Highfields, Leicester [Master: Mr. A. H. Hind*].
 COLQUHOUN: Alexander Martin; 32, Ardgowan Street, Greenock [Masters: Messrs. Southorn & MacDonald].
 COUNCELL: Thomas James; Eastdene, Redland Grove, Bristol [Master: Mr. W. L. Bernard*].
 CRAIK: David McLeod; Edburton Villa, Sketty, Swansea [Masters: Messrs. Bucknall & Jennings*].
 DAVIDSON: Walter Ramsay, B.A. Cantab.; Desswood, Aberdeenshire [Pembroke College, Cambridge].
 DAVIS-JONES: John; Carlton Chambers, Castleford, Yorkshire [Master: Mr. Robert Grierson].
 DENNIS: Robert Edward; 150, New Bond Street, W. [Master: Mr. Robert Sawyer*].
 DIAMONDPOULO: Aristotle George [Greece]; 1, Laven-der Gardens, Clapham Junction, S.W. [Master: Mr. G. A. T. Middleton*].
 DICKIE: Archibald Campbell; 32, Gibson Square, Islington, N. [Master: Mr. John Carver].
 FARRAR: George Frederic; Fairfield House, Halifax [Master: Mr. Robert Walker*].
 FLOWER: Victor Augustine; 26, Stanhope Gardens, S.W. [Master: Mr. Arthur S. Flower*].
 FLOYD: Arthur; 35, Grosvenor Place, Leeds [Master: Mr. T. Butler Wilson*].
 FORREST: George Topham; 175, Skene Street West, Aberdeen [Masters: Messrs. Brown & Watt*].
 FOSTER: Francis Roland; 1, Beaufort Road, Edinburgh [Master: Mr. S. Henbest Capper*].
 FUNNELL: Horace Frederick; 17, Trafalgar Street, Brighton [Master: Mr. E. J. Hamilton].
 GITTINGS: Henry; The Elms, Gillingham, Kent [Master: Mr. G. E. Bond].
 GOODLAND: Joshua; 5, The Parade, Exmouth [Masters: Messrs. Kerley and Ellis].
 GRAYSON: George Hastwell, B.A., Cantab.; 14, Castle Street, Liverpool [Masters: Messrs. Willink* and Thicknesse].
 GREEN: Thomas Frank; 55, Blenheim Terrace, St. John's Wood, N.W. [Master: Mr. F. Wheeler*].
 GROOM: Percy John; 6, Blythwood Villas, Crouch Hill, N. [Master: Mr. John Groom*].
 GRUBB: Ernest; 62, Dean Street, South Shore, Blackpool [Master: Mr. J. A. Nuttall].
 GRUCHY: Charles de; 13, Melody Road, Wandsworth, S.W. [Master: Mr. W. J. Ancell].
 HARDON: Herbert; 51, Wellington Road, Heaton Chapel, nr. Manchester [Masters: Messrs. Woodhouse* & Willoughby*].
 HARVEY: Frederick Milton; 169, High Street, Gorleston, Great Yarmouth [Master: Mr. J. W. Cockrill*].
 HAWES: John Cyril; 1, Spring Terrace, Richmond, Surrey [King's School, Canterbury].
 HISLOP: Alexander David; 142, Holland Street, Glasgow [Masters: Messrs. A. N. Paterson* & W. J. Anderson*].
 HOBBS: John; 5, Cambridge Terrace, St. Michael's Street, Folkestone [Masters: Messrs. Cowell & Bromley].
 HOLLIER: Ernest William; 84, High Street, West Bromwich [Master: Mr. R. F. Matthews].
 HOTTEN: Harry Walter; 23, Beach Street, Folkestone, Kent [Master: Mr. J. Gardner].
 JAMES: George; Leyland Croft, Old Road East, Gravesend [Master: Mr. Wm. West].
 JARVIS: Percy John; Grove Hill Road, Tunbridge Wells [Master: Mr. W. B. Hughes].
 KING: Edward Vincent; Hartshead Vicarage, Liversedge, Yorkshire [Master: Mr. James Ledingham*].
 KINNS: Frederick William; 112, Lancaster Road, W. [Masters: Messrs. Withall* & Ellis].
 LANGLEY: Samuel Henry; 57, Charles Street, Leicester [Master: Mr. A. Hall].
 LEE: John Stevens; 78, Comeragh Road, West Kensington, W. [Masters: Messrs. John S. Lee & Son].
 MARSHALL: Arthur George; The Oaks, Allyn Park, West Dulwich, S.E. [Master: Mr. W. E. Clifton*].
 MAYNARD: Dudley Christopher; 3, Cumberland Gardens, St. Leonards-on-Sea [Master: Mr. F. H. Humphreys*].
 MILNE: Walter Herbert; Green Hall, Cheadle, nr. Manchester [Master: Mr. J. R. Earnshaw].
 NICHOLSON: Joseph Landell; 18, Malvern Street, Newcastle-on-Tyne [Masters: Messrs. Armstrong* & Knowles*].
 NIGHTINGALE: Alfred Ernest; "Kentisbeare," Atney Road, Putney, S.W. [Master: Mr. R. Fabian Russell*].

PARKER: Richard Barry; Brockhampton Court, Ross, Herefordshire [Master: Mr. G. Faulkner Armitage].
 PATRICK: John Russell; 11, Reighton Road, Upper Clapton, N.E. [Master: Mr. H. Huntly-Gordon*].
 PICKERING: Arthur Edwin; 70, Tressillian Road, Brockley, S.E. [Master: Mr. F. Nesbitt Kemp].
 ROWELL: Reginald Bertie; 3, Duke Street, Reading [Masters: Messrs. Charles Smith* & Son*].
 SHEPPARD: George Lewis; Sansome Walk, Worcester [Master: Mr. Sheppard].
 SHIPWAY: George Walter; 2, Pilkington Road, Peckham, S.E. [Master: Mr. W. M. Brutton].
 SHORT: Ernest William George; Beaconsfield House, Kemble Road, Perry Vale, Forest Hill, S.E. [Master: Mr. W. Harvey Dyball].
 SIMM: Ernest; New Chapel House, Balderstone, near Blackburn [Masters: Messrs. Stones* & Gradwell].
 SLAUGHTER: Ernest William; "Gairloch," Alexandra Road, Reading [Masters: Messrs. Charles Smith* & Son*].
 SMITH: Cyril Wontner; 34, Woodberry Grove, Finsbury Park, N. [Master: Mr. A. M. Butler*].
 SMITH: Frederick John Osborne; 34, Southampton Street, Strand, W.C. [Master: Mr. J. Osborne Smith*].
 THOMAS: Richard Wellings; 1, Pentland Villas, Eign Road, Hereford [Master: Mr. G. H. Godsell].
 THOMPSON: Robert Milne; 2, Barrack Street, Perth [Masters: Messrs. J. & G. Young].
 TOWSE: John Stanley; Hillside, Ravensbourne Park, Catford, S.E. [St. Dunstan's College, Catford].
 WALLIS: Charles William; 6, Hampstead Mansions, Heath Street, N.W. [Master: Mr. R. Langton Cole*].
 WATSON: Alfred Edward; Southbank, Oakleigh Park, Whetstone, N. [Masters: Messrs. Brunsden & Henderson].
 WATTS: Harold; 2, Hoe Park Terrace, Plymouth [Master: Mr. H. J. Snell].
 WATTS: John Henry Vernon; 91, Chester Road, Castle Northwich, Cheshire [Master: Mr. K. Ellerton].
 WHEELER: Edwin Paul; 66, Ludgate Hill, E.C. [Masters: Messrs. Searle* & Hayes*].
 WIDDOWSON: Arthur Reginald; 4, Grey Friars, Leicester [Master: Mr. W. Morton Cowdell].
 WILLIAMS: Albert Charles; High Street, Epsom, Surrey [Master: Mr. R. Langton Cole*].

The asterisk * denotes members of the Institute.

The number of Probationers is now 517, and the number of Students, 88. These, said the President, make what I may venture to call a nursery of more than 600 junior members of the profession—a not altogether unsatisfactory outcome of the policy which the Institute has pursued during the last few years.

The Autumn Examination in Architecture.

An Examination of 58 persons to qualify for candidature as Associate was held during the week commencing 27th ult., six being examined in Manchester and 52 in London. The Oral Examination of the latter began at the Institute on Friday, 1st inst., at 10.30 a.m., and terminated the subsequent day at 4 p.m. The Chairman of the Board, Mr. Arthur Cates, presided, and the several subjects of the Examination were taken respectively by the following Examiners:—*History of Architecture*, by Messrs. H. Drinkwater, John Slater, B.A. Lond., and R. S. Wornum; *Mouldings, Features, and Ornaments*, by Messrs. James

Brooks and Alex. Graham, F.S.A.; *Sanitary Science*, by Messrs. P. Gordon Smith, Ernest Turner, and Keith D. Young; *Strength of Materials, Shoring, &c.*, by Messrs. L. Solomon and Leslie Waterhouse, M.A. Cantab.; *Plan, Section and Elevation*, by Messrs. T. W. Cutler and Alfred Waterhouse, R.A.; *Materials*, by Mr. H. D. Searles-Wood; *Construction, &c.*, by Messrs. Alfred Conder and Flint Clarkson; *Specifications, Methods of Estimating, and Professional Practice*, by Messrs. E. Gregg and B. Tabberer. At the conclusion of the Oral Examination, on Saturday, the Board held a meeting for the transaction of business, which lasted two hours. The Report of the Manchester Examiners may be expected this week, and the public announcement of the names of those who have passed and are qualified for candidature as Associate will be made to the General Meeting convened for Monday, 18th inst.

Mr. Falkener's Paintings and Drawings.

In pursuance of the suggestion made by Mr. R. Phené Spiers, after the close of the General Meeting of the 20th ult., Mr. Falkener was asked by the President to lend some of his once well-known drawings for exhibition at the Institute, which he very kindly consented to do; and the drawings were exhibited to the General Meeting of the 4th inst. A list of them is given after the minutes of that Meeting [pp. 86-88], and it will be seen that they comprise drawings in water-colour and oil paintings of ancient and mediæval historical monuments and ruins in many parts of the Old World. They will remain on view for the benefit of Probationers, Students, members, and others, until 9 p.m. on Wednesday, 13th inst. The Vote of Thanks to Mr. Falkener, moved by the President, last Monday evening, was passed by acclamation and with much cordiality.

Additions to the Library.

Mr. Andrew N. Prentice [A.], the Soane Medalist of 1888, has presented, in conjunction with its publisher, Mr. Batsford, a book that does him infinite credit, and at the same time reflects credit upon the Institute. It is entitled *Renaissance Architecture and Ornament in Spain*, and a review of it will appear in the next issue of the JOURNAL. Messrs. Chapman & Hall have sent *A Text-book of Elementary Design*, by Mr. Richard G. Hatton, and *Egyptian Art*, by Mr. Charles Ryan, both forming part of the "Science and Art Series." Several books have been added to the Loan Collection. Among them is *Knight's Annotated Model By-laws* (Knight & Co., London), fourth edition, in which care has been taken to bring the contents up to current date. New by-laws which have been prepared to meet special wants, and which have received the approval of the Local Government Board, have been added; fresh explanatory annotations and diagrams have been inserted; and recent judicial decisions on the subject of by-laws

and their interpretation have been carefully summarised. The fifth edition of Professor Banister Fletcher's text-book, *Quantities, and Valuations and Compensations*, by the same author (B. T. Batsford, London); the latter is an enlargement of Professor Fletcher's *Compensations*, now out of print; two chapters under the heading Valuations, which give in a concise form the numerous points to be notified in buying land and house property, having been added to the older work, which has undergone revision and been brought up to date. "This book," Professor Fletcher states, "is now a complete guide in valuing land and houses, for mortgage renting, for investment, as well as for making valuations, where land and houses are taken by public bodies or companies called 'Compensation' cases." *Paley's Gothic Mouldings*, edited by Mr. W. M. Fawcett, fifth edition (Gurney & Jackson, London), has also been added to the Loan Collection. *Charicles and Gallus*, companion volumes by the late Professor Becker, translated by Mr. Frederick Metcalfe, long held in great estimation by all classical students (Longmans, Green & Co., London); and *The Genesis of Mountain Ranges*, a pamphlet by Mr. T. Mellard Reade, reprinted from *Natural Science*, are among the latest additions to the Reference department of the Library. Professor F. Meldahl [*Hon. Corr. M.*] has kindly sent four Papers by himself, three of which are respectively entitled, *Jardins Projekt til Marmorkirken i København og dets Forhold til Europas Kuppelkirker, Norges Stavkirker, og Charlottenborg Slot*. All of these admirable expositions will be read with interest by readers with a knowledge of Danish. The fourth Paper, *Ueber die historischen Formen der Holzbaukunst und die Geographische Verbreitung derselben*, is, as the title denotes, accessible to those familiar with the more generally cultivated language of German.

Buildings in South Africa.

At a meeting of the South African Association of Engineers and Architects on the 25th October at Johannesburg, the President, Mr. A. H. Reid [*F.*], read a Paper on "Dangerous Buildings," and called attention to the structural weaknesses which were only too apparent in their buildings, attributing them to the fact that, as materials were very costly, builders were prone to cut down quality. This was the more serious, as in their climate buildings were subjected to excessive trials from rain and wind, and strict supervision by the local governing body was necessary. The number of dilapidated buildings in Johannesburg, considering the short time they had been in existence, was enormous, and this was entirely due to the use of inferior materials. Repairs to houses, again, were nearly always designed to make the front look well, and nothing else. A thoroughly systematic examination of all buildings at regular periods was, in his opinion, absolutely necessary,

and periodical surveys of public buildings and clubs, theatres, towers, domes, and even battery-houses and workshops, should be made and recorded by the proper authorities. He would impress upon engineers the importance of having their work overhauled by competent architects now and then, as many battery-houses were constructed of the most flimsy materials and wretched timber, and would soon succumb to wet and dry rot, white ants, vibrations from the action of machinery and wind, and changes from extreme dry to prolonged moisture. The collapse of a few of these buildings, concluded the reader, for want of such proper supervision, could not be far off, and in case of such a calamity the loss of life and money would be incomparably greater than the cost of the stitch in time by one who had had experience in such matters.

The York Society.

At the Annual Meeting of the York Architectural Society, held on the 22nd ult. [see page 90] the following gentlemen were elected as officers for the ensuing year:—President, Mr. William Hepper; Vice-Presidents, Mr. Henry Perkin, F.R.I.B.A., and Mr. Alfred Creer, A.M.I.C.E.; Hon. Secretary, Mr. A. B. Burleigh; Hon. Treasurer, Mr. N. R. Yeomans; Committee, Messrs. G. Benson, E. T. Felgate, J. T. Pegg, J. G. Perry, and J. H. Sellers. The Past Presidents, Mr. Walter G. Penty, F.R.I.B.A., and Mr. Arthur Pollard, are also *ex-officio* members of the Council.

"Alexander Thomson" Memorial, Glasgow.

The trustees of the "Alexander Thomson" Memorial have offered a prize of £60 for the best design for an Exchange for a large city, the design to be in the early Classic style. This is open to all architectural students between the ages of eighteen and twenty-five residing in the United Kingdom, and qualified as described in the Deed of Trust. Full information can be obtained from the Secretary to the Trust, Mr. John Thomson, 241, West George Street, Glasgow.

The late General Sir Alexander Cunningham, K.C.I.E.

Few original investigators of our time have reaped so large a harvest of results as General Sir Alexander Cunningham, K.C.I.E., who died on the 28th ult., in his eightieth year. Born in 1814, his public career began when he entered the service of the East India Company in 1831. His marked ability quickly brought him to the front, and he was singled out for various executive posts, and acted for some time as aide-de-camp to Lord Auckland. For twenty years from 1840 he held responsible positions as a constructor of public works and in various campaigns, winning special distinction as a field engineer during the Sikh war in 1846 by his rapid bridging of the Beas by boats. In 1858 he was appointed Chief Engineer of the North-West Provinces—no easy

post at a time when the country was still suffering from the administrative confusion left behind by the Mutiny—and this position he held till his retirement from Indian service some thirty years later. Meanwhile, however, Sir Alexander had become famous in a different line from that of his official duties. His observations and inquiries as Boundary Commissioner on the Tibetan Frontier in 1846-47 had already been embodied in two works, *The Temples of Kashmir*, and *Lalakh, Physical, Statistical, and Historical*, when in 1861 he was entrusted by the Viceroy with an archaeological survey of India. From that time until his retirement in 1885 almost every year produced results and discoveries of importance to the ancient history and geography of India. His explorations brought to light the buried framework of ancient Indian history; and his identifications of early cities and sites, although in some cases corrected or rendered doubtful by later research, are essential to any real knowledge of Hindostan. In 1871 appeared his *Ancient Geography of India*, which contains an exhaustive account of modern discoveries bearing on the Buddhist and Greek periods; and in 1892 he published his magnificent work on Gaya. His Indian collection bears evidence of long and unwearied research; and his unique collection of coins of the ancient Indian States, of the Indo-Sassanian dynasties, &c., is said to be unequalled by any cabinet in the world, not excepting the British Museum itself.

REVIEWS OF NEW BOOKS. III.

(7.)

THE MONUMENT.

History of the Monument. By Charles Welch, F.S.A., Librarian to the Corporation of London. With Illustrations, and a Map of Old London. Price 1s. 6d. Published under the Authority of the City Lands Committee of the Corporation of the City of London. 40. Lond. 1893.

Most welcome work to citizens of London and to architects is this authoritative history of one of the chief features of London proper. Still we grumble—perhaps without reason, for but little account is given of the structure while being built, or how the work was done while it was in course of construction. Chapter i. relates its "Design and Construction"; how several designs were made (as usual) by its architect, Wren, before the final one was approved with its vase of flames, instead of a ball of copper with flames gilt, a statue of Charles II. 15 feet high, or a Phoenix. Is the "wooden model of the pillar," or the model of the scaffolding used, still in existence? The latter is (or was) in the possession of Mr. J. K. Brunel, and a photograph of it would possibly have been more interesting than some of the woodcuts; the model might be now placed in the Guildhall Museum.

A manuscript in the Guildhall Library contains the particulars of expenses, and, moreover, affords the names of the chief artists employed on the work. Of "Joshua Marshall, Mason," some account might have been given, following that of Christopher Wren, Architect, and of (Caius) "Gabriell Cibber, Sculpter," who in one paragraph is styled "Gabriell Cibber, Sculpter Mason," showing how in those days the artist and workman were one man: without this connection, indeed, the art displayed in London buildings might have been greatly inferior to what it was and has come down to us. Cibber carved the "Hieroglyphick figures on the 'columne.'" Robert Bird was the coppersmith, and William French, blacksmith, was the fourth chief artisan employed, though no doubt Thos. Woodhouse, carpenter, and Anthony Tanner, bricklayer, both did well the little work they were called upon to perform. The exact quantity of Portland stone is copied from *The Parentalia*, as estimated by the architect, being 28,196 feet cube. The cost of the Monument is given as £12,347 12s., under which amount is a mysterious sum of "£1,102 19 09," to which no description is given! Shall we assume that this was the amount paid to the architect for his commission, including any clerk or clerk of the works (the names of Wren's assistants, beyond that of his best pupil Hawksmoor,* are unknown!)? It is nearly 10 per cent. Thus the whole expenditure is put at £13,450 11s. 9d. How deep was the excavation? Was anything found of the Roman occupation? are questions among others that arise in the mind of an architect or of an archaeologist, and probably they are impossible to be answered, or they would have been notified in this admirable description.

Chapter ii. describes the Sculpture—the hieroglyphics of the account—and the Inscriptions on the Pedestal. Historical Incidents and Literary Notices are comprised in chapter iii., including the fact that "the late City architect," Mr. Alexander Peebles it may be assumed, took advantage of the swinging scaffolding that was erected in 1888, to measure every portion of it, and then made drawings to a scale of eight feet to an inch. "The building is now in as good a condition as ever." Chapter iv. comprises "A Brief Account of the 'Great Fire of London,'" and includes many interesting letters and accounts of that terrible event, and of the incidents which arose out of the Acts of Parliament for rebuilding the city. Rolle's quaint remark is amusing: he states that streets were widened and houses carried up higher than before, and then proceeds to explain the fact, "in order to the gaining of more room, those latitudinarian streets requiring altitudinarian houses." Wren's plan for rebuilding is given and described; and this most interesting publication, which is

* His name is on the print of the Monument dated 1723. The edifice was erected 1671-1677.—W. P.

rendered accessible to the public at an easy rate, is wound up with a valuable list of "Views, Bibliography, and Authorities," both manuscript and printed, of this grand design, equalling any similar Memorial column of ancient times, the names of which are given in a table extracted from *The Dictionary of Architecture*.

WYATT PAPWORTH.

(8.)

ARCHITECTURAL CHRONOLOGY.

A Chronology of Mediæval and Renaissance Architecture. A Date-Book of Architectural Art from the Building of the Ancient Basilica of St. Peter's, Rome, to the Consecration of the present Church. By J. Tavenor Perry, A.R.I.B.A. Price 16s. [Mr. John Murray, Albemarle Street, W.]

The scope of Mr. Tavenor Perry's work is fairly well expressed by the title quoted above, though the addition of the dates (306 A.D. to 1626 A.D.) would make it more precise. But the title on the cover, "Chronology of Architecture," might mislead the student who saw it on a bookshelf, as of course it excludes all pre-Christian work and much of the Renaissance. It will probably be admitted that this is in itself an error. The author explains in his preface that the period he has chosen was "one of the greatest activity in architecture that the world has ever seen"; but it is at least doubtful whether, for shorter periods, as much activity has not been displayed before; and there seems no sufficient reason for the selection of such a limited time, nor for its connection with a particular building. It may be hoped that we may see a new edition which will take us back through Greece, Egypt, and Assyria (to note how the wave of art set ever westwards as the centuries rolled on), and forwards to 1700 A.D., so that we may not miss from our "Chronology" the mighty name of Wren, nor look in vain for the date of Sta. Maria della Salute. Within the limits prescribed, the arrangement of the book calls for little but praise. An introduction gives the student an idea of the style prevalent from time to time in the countries of Europe by numerous examples arranged in a tabular form. We may note, however, that if England has nothing to show for the years before 1050, yet Ireland, with its wonderful series of early churches, related apparently to those of the Grecian Archipelago, and its round towers stretching back to the ninth century at least, might have helped to fill the gap.

After the introduction follows a description of the illustrations, some eighteen in number, with their dates. Here we pause to ask why it is that in hardly any book yet published on architecture are the dates of the buildings to be found attached to the illustrations? Even Fergusson often leaves the reader in complete bewilderment as to the date of the building he is describing, while the Italians shame us by putting on their half-lira photographs, not only the date, but often the name of the archi-

tect of the building represented. From this digression we return to the *Chronology*, which proceeds to mention, in 200 pages, a series of consecutive years, and gives the architectural events of each. The value of this list, dealing, as it does, mainly with well-ascertained facts, cannot be overestimated; and the indices of places and architects, which follow it, enable instant references to be made to a man or building, the references being by year and not by page; they are further divided by mention of the building as a sub-heading to the place, so that one does not waste time in looking (for example) for a house at Halberstadt among the dates of the Dom. The descriptions are generally sufficient, but they are sometimes too laconic. For instance, we are told of Le Mans as follows:—

1134. Cathedral damaged by fire.

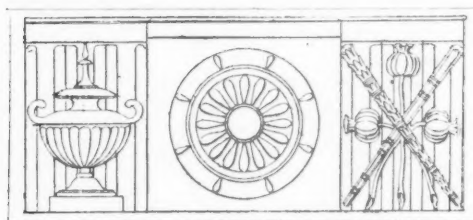
1145. Cathedral. Date carved on south-east pillar of crossing.

1158. Cathedral consecrated.

Now, we know that Le Mans Cathedral consists of a round-arched nave, with very interesting Romanesque capitals, and a splendid Pointed choir, with its cluster of chapels, towering far above the nave, and entirely different in style. The entries are no doubt correct, and the damage to the cathedral led to the building of the choir; but one would expect to find some mention of the erection of the nave in the previous century, and something to indicate that it is the choir which was dated and consecrated in the years referred to. Again, in 1163, we learn that St. Kevin's cell at Glendalough was burnt. This is the only mention of the interesting remains of that charming place, and, as no authority is given, may we hope it is incorrect? St. Kevin's cell—now called his church—is surely earlier than 1163, and does not look as if it had suffered much from burning at any time, being the only building in the valley which retains its original roof. These Irish remains are so unique, and so much earlier than anything we have in England, that one may be pardoned for wishing them to be referred to as frequently as possible, even if a few German churches were left out in consequence.

Among the founders and architects the name of Rahere is absent, though his strange story, no less than his two foundations at St. Bartholomew's, entitles him to remembrance in connection with his noble church. The hospital, however, is not referred to in the chronology, nor is his tomb, though, perhaps, the latter is too small a structure for insertion. A more remarkable omission is that Michelangelo is only mentioned in connection with the Farnese and the Collegio della Sapienza. His work at St. Peter's and at Florence escapes notice altogether.

In conclusion, the book is one which will be a welcome addition to an architect's shelf; and if it errs, it is chiefly in that it is less comprehensive than one would wish it to be.—R. LANGTON COLE.



HYPÆTHRAL TEMPLES.

BY PROFESSOR E. CURTIUS, OF BERLIN.*

The octastyle temple of Zeus on the banks of the Ilissos at Athens was a building having the cella entirely open to the sky, without a roof. As a consequence, the term *hypæthros* applied to it by Vitruvius can no longer serve as a specific name for temples that had roofs like the Parthenon, and may have been lighted through them. This important advance in our knowledge of ancient buildings we again owe to Dr. Dörpfeld.

The hypæthral question must now be considered from an essentially different point of view, seeing that the one definite testimony we possessed for hypæthral structures has vanished. But is the whole question decisively answered? Is it therefore proved that the architectural idea of King Antiochus in erecting to Zeus in Athens a complete *ναὸς ὑπαίθρος*, with an αἶλή περίστυλος in the middle, was something entirely new and original—a plan of construction without precedent? Is it not much more probable that here also an old national tradition had been before his mind, and that a problem which had existed in former times was now solved in a new manner? For the temple which Cossutius erected at the cost of the Syrian king belongs, equally with the δεκάστυλος διπτερος, to the series of Hellenistic wonders which, by their exaggerated dimensions and daring construction, were intended to surpass everything that had existed in ancient communities.

Thus a fresh light is thrown on the relation of Hellenic to Hellenistic buildings. The old controversy as to temple lighting must turn on the newly acquired facts, and to prevent hasty conclusions being drawn from them I will here mention some circumstances which seem specially worthy of attention.

In private houses the original source of light was the door. Light and air entered from the street. Houses with an easterly aspect were therefore in favour. They would receive the full brightness of the rising sun [Lucian, *De Domo*, 6]. The idea of a top light, in preference to side light from the door, arose in connection with the neces-

sity of an opening in the roof for the outlet of the smoke from the hearth (*καπνοδόκη*), such as we see in the old palace of Lebaie so vividly described by Herodotus [viii. 137]. The doors having originally served as windows, these top openings were naturally also called doors (*θύραι*, *θύραι φωταγωγοί*). With the introduction of top lights begins the characteristic development of the Hellenic house. Lucian attributes the charm of a house to the skilful disposition of the windows (*ἐκ τῶν φωταγωγῶν μεμηχανημένη*). On the channels of light (*φωταγωγία*) depend the elegance, the health and comfort of the house. Every description of roof was invented to flood with light the interior of the building by means of horizontal openings, and from this illumined court to light the surrounding chambers. Thus it was possible, as Lucian says, to throw objects out of these chambers (*διὰ τῆς φωταγωγῆς*) into the *ὑπαίθρον τῆς αἰλῆς* [Lucian, *Convivium*, 90].

It was a special care to have the top light arranged to suit the different seasons of the year (*πρὸς ὧραν ἐκάστην εἶ ἔχον*) [Lucian, *De Domo*, 6]. In rainy seasons, wood boarding was provided (*stratura ex tabulis, quæ æstate tollerentur, hieme ponerentur*). As in old German towns the arrival of summer was announced by benches placed before the doors, so in a well-constructed ancient house the boarded roof was removed during the summer months, and replaced by curtains so as to shade the opening without barring the passage of fresh air. In this way a gradually increasing luxury was developed. For goat-skins woven material was substituted. In time coloured curtains came to be employed to throw a soft, agreeable light on the white marble of the court. Ovid very attractively depicts the charming effect of a *velum purpureum* [Metam. x. 592]. Everything essential to the boarded roof was included in the fixtures of the house; the *veia* were the property of the tenant, as the Roman jurists clearly distinguish.

That this system, which we see so luxuriously developed among the Romans, had been familiar to the Greeks is clearly shown by the ever-recurring but never Latinised word *hypæthros*. There seems to have been in the Hellenic nature a deeply-grounded, irresistible impulse to enjoy the light and air of heaven. With an almost Greek sensitiveness Vitruvius praises the healthiness and invigorating effect of the open court. To the Greek, daylight in the house was a necessity of life. Lucian attests this in a special manner when, along with the fine proportions of a house in length, breadth, and height, he extols *τῶν φωταγωγῶν τὸ ελευθερον*. It was a distinction between the free-man and the slave that the former could not bear darkness nor dull obscure light. The same was the case between Hellenic and barbarian. Ample daylight (*πολλὴ ἡ εὐδὸν ἡμέρα*) [Lucian, *Hippias*, 7], αἰλή, *φωταίγειν* was indispensable to a Greek's

* Address to the Archaeological Society of Berlin, at a Meeting held in June 1893; and here published with the Professor's permission, the translation having been revised and communicated by Alex. S. Murray, LL.D. [H.A.].

enjoyment of life, and the anxiety of providing for it (by the *φωταγωγία*) was one of the most important problems in domestic architecture, and kept the faculty of artistic invention continually on the stretch.

This activity extended naturally to public buildings. We have an example in Kyzikos, a city rich in architectural invention [Plin. xxxvi. 100]. There the town-hall had a roof which was famed as a masterpiece of carpentry, the beams being so fixed that they could be removed and replaced without difficulty. As occasion required, a roof was available more or less open in summer, and in winter closed (up to the *οπαῖον*).

Suppose we had nothing else from antiquity than the numerous and much-varied expressions, scattered in writers and lexicographers, all having reference to top-light—*ὀπαῖον*, foramen tecti, tecta perforata, transsecta; tecti pars patet, lumen summo tecto accipitur, locus tectus intra parietes relictus patulus, cœlum liberum, cœlum patet, tectum interpatet. Allow that most of these expressions come from the Romans, who more than the Greeks are given to mention practical contrivances, we may still safely conclude that to reconcile the necessity of light and air with closed rooms had been from old times one of the chief aims of domestic architecture, and had been practised with gradually increasing skill.

In religious matters new considerations arise. From the time of the Pelasgians the pious Hellenes felt surer of the divine presence under the open sky. They prayed and sacrificed *sub divo*, and the altar of Zeus Herkeios can only be imagined as *ἐν ὑπαίθρῳ τῆς ἀλγῆς* [Paus. ii. 24]; he who would take an oath, *prodibat in impluvium*.

How could men who enjoyed life only in the open air think it would be otherwise with the gods of Olympus! As to the astral deities, it was a law that they could only be invoked in the open air. Places where they had given special tokens of their presence could not be closed from the heavens by any roof.

It may have been folly, in the oldest popular belief, to confine the divine power within walls, but the introduction of image worship required temples to shelter the *εἴδωρα* of the gods.

The architectural member whose function in the Doric temple is first mentioned by name is the metope. The word indicates an open space between two triglyphs. The etymology may be questioned, though there is no satisfactory ground for that. But we have a further and perfectly independent confirmation in a passage of Euripides [*Iph. Taur.* 1181], where Pylades proposes to get into the interior of the temple by means of the opening between the triglyphs. The text is trustworthy and its explanation unquestionable, and, however adventurous the proposal (of Pylades) may sound, the poet, well versed as he was in the antiquities of his country, could never have sug-

gested to an Attic public what was absurd and sure to excite ridicule.

We have thus sufficient evidence that even in the earliest temples there had been an endeavour to make the cella independent of the light entering in by the door, and to illumine it by means of high-placed side windows (*θίραι φωταγωγοί*).

Metope windows being impossible in peripteral buildings, the question arises whether in these splendid edifices with their surrounding porticoes a return was made to the primitive method of lighting by the door. Had this been so, Vitruvius, in his notice of the various forms of the Peripteros, would have reflected on the Pyknostyle as prejudicial to the influx of light. The only objection he urges is that it prevents a free view of the door, and that the sculpture cannot be well seen from the outside [Vitr. 71]. But when it is argued, from the great width of the doors, that they must have served some other purpose besides that of entrances, this inference cannot be accepted, seeing that the width of the approaches and entrances to the temples tended to the special honour of the gods, as the *ὁδοὶ ἐκατόμπεδοι* prove. Besides, the Pantheon shows that wide doors do not make a top-light superfluous. In private houses streams of light lent grace and dignity to the rooms, and we may also assume that the dwellings of the gods were not less cared for in that respect. This is shown by the metopes of simple temple cellas, and confirmed by the temple of Athene Nike in Athens, the fronts of which had no walls on either side of the door, so as to allow the entrance of as much sunlight as possible into the small chamber. Those temples, which were essentially treasure-houses, we must conceive to have been lighted from above. It appears to me incredible that the taking of pieces of the Parthenos statue, and the careful weighing of all the valuable parts of it and of its basis, could have been carried out under the supervision and responsibility of a large number of sworn officials with wide open doors. In regard to the temple at Delphi, we learn from the *Ion* of Euripides that the doors were shut when Xuthos wandered through the rooms, and that the persons outside became aware of his return by the great noise as the heavy doors rolled open. The doors therefore served only for people going in and out. Apollo enters from above (*culminis per aperta fastigia*) into his sanctuary; again, the thunderbolt which Zeus hurled down in front of his image (at Olympia) was not thought to have broken through the roof, and it is a firmly established fact that the vase which was placed as a record of this divine approval of the work of Pheidias stood under open sky.

In temples which were not, like that of Athene Polias, open for daily service, the great doors must be supposed to have been shut except on special occasions: (hence [Plautus, *Bacchides*, v. 900] *Abiit in arcem eodem viscere Minervæ, nunc*

aperta est; for ordinary visits of strangers there would be smaller entrances.

The opinion has been expressed that for colossal statues within temples it would be an advantage if the light were not too powerful, and certainly the Greeks knew how to produce an effect of solemnity imposing in the highest degree. We may be sure that if in private houses the greatest skill was displayed in procuring impressive light-effects by artistic arrangement of the curtains for the openings in the roof, no technical device would be neglected which could give full effect to the matchless temple statues of a classical time, whether by subdued or brilliant illumination. Above all, it was necessary that the detail, which was lavished with unexampled artistic resource on these statues, should be easily and fully appreciated. Nor can we avoid the conviction that, had the doors really been the only source of light in the Parthenon and in the temple of Zeus at Olympia, the position and dimensions of the colossal statues would have been different. With light only from the door, it is difficult to comprehend why the place chosen for the statues should have been the very farthest from the door and the most exposed to obstructions in the general view of the statues.

As regards the temple at Olympia the pictures of Panainos give us a clue. These pictures decorated the barriers which enclosed a court where people assembled directly at the feet of the image of Zeus for quiet contemplation. So expressive a combination of painting and sculpture even the Parthenon did not possess. This arrangement of the interior of the temple was arrived at under the immediate influence of Panainos, and if he placed his famous pictures on the inner side of the barrier we cannot possibly imagine that he should choose for them surfaces which would be completely in obscurity, even at noonday, with the doors wide open! This court, on which Panainos had bestowed special care, necessarily presupposes an upper light.

The use of lamps and candles which we would otherwise have to assume in this instance is only known to us in the "Opisthodomos" of the Acropolis, a building which in my judgment [*Stadtgeschichte*, p. 132] was no other than the back chamber of the older Hekatompedos, a room without top-light, requiring to be artificially lighted when the moneys and inventories were being revised. In these circumstances fires might arise such as the one mentioned by Demosthenes [c. *Tim.* 743].

Financial records and accounts were deposited for official control; but there were also in the temples a quantity of memorials meant for the public in general. Thanks to the learning and diligence of Lolling, many inscriptions which had been incised on the bases of small works of art dedicated to Athene have been identified as such. The least the donors would expect was that these

inscriptions could be read with convenience, while every artistically inclined visitor to the Hekatompedos would wish to examine these works carefully. Nowhere else could be seen such rich and varied offerings of Athenian piety.

Far more important were the inscribed tablets referring to matters of national interest, such as the pillar in the temple of Zeus at Olympia, on which were minutely recorded the materials and quantities of the colossal gold and ivory statue. Are we then to suppose that when it was desired to examine these wonderful objects stored up in the temples with more leisure than was available on the open days of public festivals, the doors had to be opened specially?

Those who adduce the strength of the southern sun, as an argument against the necessity for a top-light, must remember that precisely on the occasions of high festivals, when everything ought to appear in the greatest brilliance, the light from the door would be much diminished by the great trains of citizens crossing the threshold and filling the entire nave.

But, irrespective of the paintings of Panainos and their position adverse to lighting from the door, we have positive examples of artistic decoration which most certainly could not have been satisfactorily seen by door-light—above all, the frieze of Phigaleia, as to which the opponents of a top-light have been obliged to accept an hypæthral cella. Was, then, the principle of construction thus admitted a solitary exception? That is surely an assumption of the highest improbability if we consider how far the artistic decoration within temples may have surpassed any idea we can form, how early the necessity of an upper light had been felt by the Greeks, and how in all branches of architecture they had applied themselves to the task of roofing large buildings without thereby debarring the entrance of daylight.

It is true, we are not in a position to form a clear conception of roof construction, developed as it had been by long practice and great technical skill; but that is no evidence against hypæthral lighting. One of the best proofs of our imperfect appreciation of the works of art most admired in antiquity is the fact that it is impossible for us to form a satisfactory idea of the colossal images in the temples and their effect.

No less inconclusive is the circumstance that no positive evidence has yet been obtained of an impluvium in Greek temples. Meanwhile, as far as I see, it has not yet been proved that the holes still to be seen in the floor of the temple of Zeus at Olympia, measuring 0.44 metre in length and 0.24 metre in width, were not adapted for carrying off rain-water, like the holes in the floor of the Pantheon. They took up and drained off the water which we poured in by way of experiment.

My aim has been to guard against considering as solved an important problem in the history of

ancient buildings, because of the discovery at the Athenian Olympieion. Any one conversant with recent literature knows how his estimate of the various temples fluctuates amid conflicting opinions. We have not to pronounce a verdict, but to go on always learning. The pierced roof-tiles at Olympia which conveyed light to the attic have only been recently discovered. When Dörpfeld says, "Nothing has been found that would indicate the existence of a large top light," that is true. But the question is not the magnitude of the opening. Much could be obtained by a very moderate aperture which should admit zenith light.

The Hellenistic hypæthral temple is the product of a long series of Hellenic roof constructions which provided for the temple a top-light of greater or less dimensions. What had not been attempted under a Roman sky was, so far as we know, first achieved in the octastyle temple of Zeus, on the banks of the Ilissos, a bold and splendid edifice which was not content with merely an opening in the roof, but left the entire nave roofless, like an hypæthral peristyle.

Taking as a basis material collected chiefly by Karl Bötticher with his indefatigable industry, I have attempted to prevent unjustified conclusions being drawn from the recent discoveries. In my judgment a lightless Greek temple is so incredible that the technical impossibility of a top-light must be proved before I can relinquish belief in it.

NOTES, QUERIES, AND REPLIES.

Heights of Houses in London after the Great Fire.

Among the Rules and Directions, printed by Stow [vol. i. p. 293], for rebuilding the City of London after the Great Fire of 1666, are some interesting items determining the character of the new houses and the heights to which they might rise. The first category of house was to have two storeys, besides cellars and garrets: the cellars 6 feet 6 inches high, and the two storeys each 9 feet high from floor to ceiling. The second category was to consist of three storeys besides cellars and garrets: the cellars 6 feet 6 inches high, the first and second storey each 10 feet high, and the third 9 feet, from floor to ceiling. The third category, fronting the principal streets, was to consist of four storeys besides cellars and garrets: the first storey or ground floor to be full 10 feet high, the second or first floor 10 feet 6 inches high, the third 9 feet, and the fourth storey 8 feet 6 inches, from floor to ceiling. The roofs of all these three sorts of buildings were to be uniform. Thus, allowing the level of the ground floor or first storey to be raised 10 inches above that of the street (such height being prescribed as not more than 13 nor less than 6 inches above the street), houses of the least sort were about 20 feet from the street-level to the eaves; houses of a better sort about 32 feet 6 inches; and houses fronting the prin-

cipal streets about 43 feet. All houses of the fourth sort of building, to use the exact words of the Rules, were "Mansion houses and of the 'greatest bigness,'" and were therefore to have the heights, &c., of their storeys left to discretion, but "so that four storeys be not exceeded."

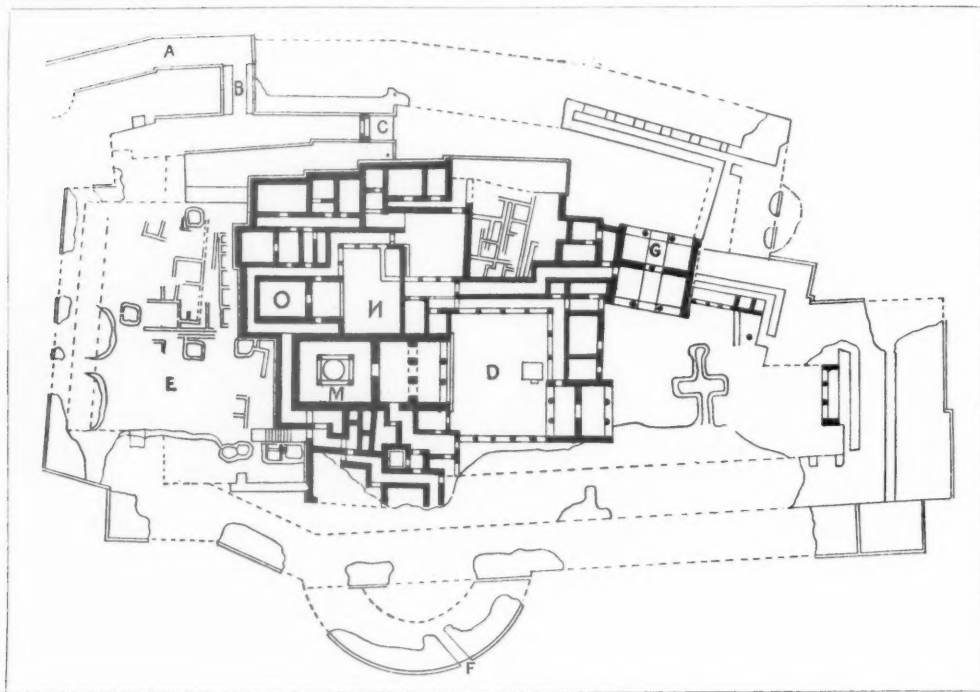
Vitruvius's Grecian House.

From Professor T. ROGER SMITH [F.]—

While fully recognising the many excellences of Mr. Falkener's Paper on this subject, I cannot feel that it satisfactorily provides an account of such a Grecian house as Vitruvius describes, the more so as the Roman architect's description has to be rearranged, and in part explained away, in order to make it fit with the plan of a pseudo-Pompeian house which the learned English writer propounds. It seems therefore worth while, now that the ground plans of a great Greek palace at Tiryns and of a smaller one at Mykene are available, to inquire if they throw light on the Vitruvian description. It is quite true that Tiryns dates from a period many centuries anterior to the time of Vitruvius; but, as Mr. Falkener himself observes [p. 38],—"the forms then (*i.e.* in the "Augustan age") in use had their origin in the "Homeric period, though the names were "changed"; and my suggestion is that the disposition of those forms adopted generally in Greece also had its origin in that age.

If we take Dr. Dörpfeld's ground-plan of the palace [fig. 1, next page], and accept his explanation of it, and with the plan before us read the description of the Greek house in Vitruvius without any inversions or omissions, we shall find that Vitruvius's description is very closely fitted by the general disposition, and in some particular by even the details of that plan. Taking the paragraphs as Mr. Falkener numbers them, the following points may be noticed: (1) There is no atrium at Tiryns. (2) You enter a not very spacious propylæum, having on one hand two rooms, which are probably porters' rooms, and on the other traces of buildings of which the plan cannot now be recovered, and which it is quite possible were stables. This porch would be appropriately termed *θυροπέδιον*. If the obscure words about inner doors mean that they are close to the porter's door, the plan agrees therewith also. (3-7) From this propylæum the first of two peristyles is approached along a passage. The two peristyles stand side by side at Tiryns, and not one beyond another, as Mr. Falkener's plan suggests, though in fact it fails to provide the two peristyles which Vitruvius describes. The peristyle, and its appendages, which is first reached is the women's part, or *Gynaecoon*, and this is the part first dealt with by Vitruvius.

This peristyle is less ornate than Vitruvius describes, but there is in it the shallow vestibule looking south, which he calls *prostas*, and behind it comes the women's *megaron*, which answers to

FIG. 1.—THE FORTRESS OF TIRYNS, FROM A PLAN BY DR. DÖRPFELD IN SCHLIEHMANN'S *Tiryns*.

A, Slope up to the Gate; B, Gateway; C, Gate of Upper Fortress; D, Courtyard of the men's apartments; E, Middle Fortress; F, Postern; G, Great Propyleum; M, Megaron of the men; N, Little Courtyard; O, Megaron of the women.

the *œci magni* of Vitruvius where the women and spinsters spent their time. There are chambers adjoining which may well furnish *thalamus* and

substitutes for them which existed in the Homeric age (8-10). "To this is joined," says Vitruvius. "a larger house with more spacious peristyle."

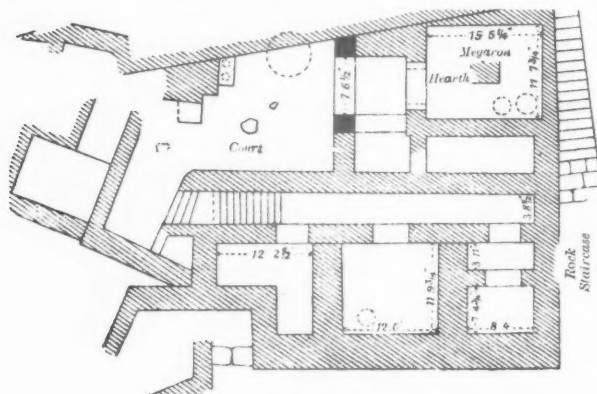


FIG. 2.—HOUSE AT MYKENE.

antethalamus, and there is a considerable space of which the plan is not now capable of being made out, and which may be taken to have provided the *triclinia*, *cubicula*, and *cellæ familiaricæ*, or the

house with more spacious peristyle." To this large house he subsequently gives the name of *Andronitis*—the men's quarters; and accordingly adjoining the women's house—but almost entirely separated from it we find on the plan of Tiryns another house containing the larger and more ornate men's peristyle, with its *prostas* and the men's *megaron*. This house, Vitruvius adds, has its own handsome portal, which is exactly what we find at Tiryns, and thus far at least the ruins of the building singularly correspond with the main lines of the author's description. There are, as was the case in the women's part, considerable portions of the plan which are no longer recoverable, and it may well be that were we in possession of them we should find them correspond to some of those parts of the *andronitis* as described by Vitruvius of which I cannot pretend to find counterparts at Tiryns; but we must not forget that it is not likely that, in so remote an age as that in which Tiryns was

built, either a library or a picture gallery would be provided.

The plan of the palace at Mykene, though smaller and less complete, so far corresponds to that of Tiryns as to show the men's *megaron* as entirely distinct from the women's rooms, the two being at opposite sides of a court. The small house at Mykene, of which a plan is appended [fig. 2], shows a very marked separation between the men's and the women's apartments, though arrived at in a different way, the women's apartments having been situated in an upper storey.


To return to the plan of the palace at Tiryns; there are in it two peculiarities which deserve to be pointed out, and in which it differs altogether from the arrangements universal at Pompeii. The first is the almost Oriental care with which the access to the women's hall from the outside or from the men's side of the house is rendered tortuous, so that no one can see in from the street or from the outer court or from the men's court, and that any person entering has to pass round more than one angle obstructing direct access. The other peculiarity is the existence of narrow passages running quite round the back of the women's hall and the men's hall, and apparently intended for the use of slaves and attendants. The various chambers, and, in fact, all parts of the house, are accessible to slaves using these passages without it being necessary for them to cross either the men's or the women's hall or court. In the ordinary Roman or Pompeian house all these elaborate passages give place to one short straight corridor—the fauces—opening at one end into the atrium, and at the other into the peristyle, so that the tablinum was the only part of the house which the slaves need never pass through.


REPLIES.

3. Brick and Concrete Walls [p. 58].

From J. W. COCKRILL [A.]—

In 1875 I used a similar mode of construction to that described by Mr. Gethin, Portland cement being used for the concrete. I found, however, that only when a wall was 18 inches or more in thickness was there any economy. The work then done is quite waterproof. In my neighbourhood ordinary brickwork may be taken as costing 25s. per yard cube. Good concrete, at the present price of Portland cement, can be done at 12s. per yard cube. This fact, coupled with the desire to introduce surfaces of glazed ware, led me in 1886 to use concrete in the construction of a cemetery chapel with a glazed wall lining internally, and coursed flint with terra cotta dressings externally; the lining was made for me by Messrs. Doulton, and their "cellular" terra cotta was the outcome of my desire to introduce terra cotta into this particular class of construction. The glazed lining was made for me 9 inches by 4½ on face, with the back hollowed out 1¾ inch thick. The

cost of this work hardly exceeded what it would have done if executed in the cheapest way in plain brickwork. I have since erected a lavatory with a similar mode of construction, but have used a tile of section . This tile was made by Messrs.

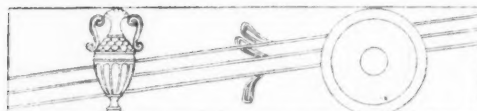
Doulton double , and partly cut before burning. In this case a wall is produced with both surfaces glazed at about the cost of ordinary unglazed brickwork. I am now using the same tile in two new ward blocks at an isolation hospital, effecting by its use a saving of at least £200, producing better walls than can be done by any other mode of construction, this class of work having all the advantages which Mr. Gethin claims for it. For underground work in which one side of the concrete is against the soil a considerable saving is made by using such a method, and in plans now being made by me for swimming baths, subways, and sewers I intend introducing it, and estimate that a saving of quite thirty per cent. will be made over any other form of glazed surface construction which could be adopted, in which the face is bonded with the body of the wall.

From E. M. GIBBS [F.]—

Thin Waterproof Walls.—Somewhat similar advantages to those claimed by Mr. Gethin for his brick and concrete walls have been obtained by the building of walls only 10 inches thick, consisting of two half-brick walls built 1 inch apart in cement mortar, the 1 inch being also filled with it as the walls are built. No headers are used. The cement is the bond. These walls are used in sale shops of steel and iron framework construction, filling in spaces about 13 feet square; the object being the reduction in weight and the saving of valuable floor space. The walls are in some cases faced with glazed bricks, and in others with brick and stone in bands. In all cases they have resisted the rain.

From W. HILTON NASH [A.]—

With reference to the notes which appeared in the last issue of the JOURNAL by Mr. Gethin, I may state that I have recently built some walling of a similar character, only the outside was faced with stone instead of brick. This was employed in a church in Sussex, and appears to have answered very well. The concrete between the stone and brick linings forms a sort of vertical damp course which is very advantageous in exposed situations. The stones were 12 to 15 inches in height, and band stones were let in at intervals. It is very important in this class of work to proceed with deliberation, or the concrete is apt to make the stonework bulge. The concrete should be inserted every four courses. The brickwork in the walls I allude to was 9 inches thick, the stone 6 to 9 inches thick, with about a 7-inch cavity between, which was filled with cement concrete.



9, CONDUIT STREET, LONDON, W., 7 Dec. 1893.

MINUTES. III.

At the Third General Meeting (Business) of the Session, held on Monday, 4th December 1893, at 8 p.m., Mr. J. Macvicar Anderson, *President*, in the chair, with 20 Fellows (including 8 members of the Council) and 29 Associates (including 1 member of the Council), the Minutes of the Meeting held 20th November 1893 were taken as read and signed as correct.

The Secretary announced the names of the following applicants for candidature: As *Fellows*—Benjamin Ferdinand Simpson (Newcastle-on-Tyne), Charles James Smithem, and Walter Hilton Nash [A.]; as *Associate*—John Alexander Russell Inglis (Edinburgh); as *Hon. Associate*—James Roger Bramble, F.S.A. (Yatton, Somerset).

A list of donations to the Library was taken as read, and an expression of the thanks of the Institute to the several donors was ordered to be entered on the Minutes.

The President announced that, by a Resolution of the Council, pursuant to the By-law No. 20, the following defaulters had been suspended from membership until the 31st December 1893, namely:—Hugh Roumieu Gough [F.] and Alfred William Mardon Mowbray [F.]. Further, that, by a Resolution of the Council, pursuant to the By-law No. 20, the following defaulters had ceased to be members of the Institute, namely: George Ashdown Audsley [F.], John Lewis Holmes [F.], Walter Mercer on Hudson [A.], and William John Willcox [A.].

The following member, attending for the first time since his election, was formally admitted and signed the Register of Associates, namely:—John Brightmore Mitchell-Withers, jun. (Sheffield).

The President referred to the loan by Mr. Falkener of his paintings and water-colour drawings which were exhibited in the Meeting-room, and stated that the exhibition of the same would continue until the close of Wednesday, 13th December 1893. Whereupon it was

RESOLVED, that the cordial thanks of the Institute be offered to Mr. Falkener for his kindness in lending his paintings and water-colour drawings for exhibition.

The President announced the results of the Preliminary Examination held on the 14th and 15th November 1893, in London and Manchester, and read the names of 73 persons who had been registered as Probationers [see p. 75].

The following candidates for membership were elected by show of hands, namely:—

As Fellows (3).

CHARLES FRANCE (Bradford).
THOMAS JERRAM BAILEY [A.], Architect to the
School Board for London.
WILLIAM HENRY ARBER [A.]

As Associates (12).

CHARLES ARTHUR FORD WHITCOMBE.
JOHN WHITE, Glasgow.
WILLIAM GREGORY WATKINS (Lincoln).
HENRY ARTHUR CROUCH (Brisbane, Australia).
ROBERT SHEKLETON BALFOUR.
ARTHUR GEORGE MORRICE.
REGINALD ARTHUR RIX.
FRANK EARLE (Hull).
EDWARD SKINNER (Colombo, Ceylon).
CECIL STUART ROCHE.
DAVID WILLIAM KENNEDY.
ERSKINE SEATON CUMMINGS.

As Hon. Associate.

JOHN OLIVER SURTEES ELMORE, Assoc. M.
Inst.C.E. (Kapurthala, Punjab).

As Hon. Corr. Member.

The Commendatore RODOLFO LANCIANI, Architect, Member of the Archaeological Commission of Rome, &c. (Rome).

Mr. Sydney Vacher [A.] having asked certain questions respecting the title of the Examination qualifying for candidature as Associate, the educational functions of the Institute, the purposes of the division of the United Kingdom into architectural districts or provinces, the intentions respecting the Home District, &c., the President replied to each categorically [Appendix B].

Mr. Wm. Woodward [A.] having asked a question as to delay in revising the conditions of Builders' Contracts, Mr. Edwin T. Hall [F.], formerly Hon. Secretary of the Practice Standing Committee, replied on behalf of that Committee [Appendix C]; and, further, having invited attention to the alleged official practice of deferring action respecting building works believed to be executed in contravention of the Building Acts, whereby serious loss to owners, architects, and others might be entailed, a discussion ensued, in which Mr. Woodward agreed to allow the matter to be referred to the Practice Standing Committee for the purpose of embodying a recommendation thereon in their report to the Council of the Institute on the Consolidation Bill proposed to be introduced into Parliament by the London County Council [Appendix D].

The proceedings of the Meeting having been thus brought to an end, the Institute adjourned at 9.30 p.m.

APPENDICES.

A. Description of Mr. Falkener's Drawings. Pompeii.

1. *Maritime Villa*, called the House of Diomedes. This drawing gives an idea of what the houses of Pompeii were like which sloped down to the sea at the time of the destruction of the city. The sea-front is a restoration, as is also the upper storey which faced the street. The portico, with pediment overlooking the peristyle, is not shown in Gell's *Pompeii*, but the columns are still existing, having been walled up by the last owner, so as to get a Cyclic Triclinium. Vesuvius, as seen from Pompeii, is very different from what it appears as seen from Naples. It shows the huge crater which caused the destruction of these cities of the Campania.

2. *The Prothyrum* of the House of the Faun.—In this drawing are seen the stepping-stones, so constantly used in Pompeii in consequence of the height of the foot-pavements. At the side of the entrance is one of the shops belonging to the owner. There is a mezzanine over the shop, and the noble door of the mansion is nearly as high as this upper room. The height of the shops is always equal to the height of the atrium behind; so that what the Italians call the *piano nobile*, or the upper floor of the mansion, extended over these shops. Just inside the door is seen, very high up, the Lararium, which is referred to by the prophet as "behind the door." The Lares were saluted, or were supposed to be saluted, by every one going into the house, but the Lararium was generally in the atrium itself.

3. *The Taberna*.—We here see one of the shops. The upper part of the shop was approached by a small wooden staircase, and it served the same purpose as the back room of our shops. As these rooms were generally open, the painted ceilings would be visible as one passed along. The holes in the curb for tethering horses will be noticed, and the polygonal pavement. This house is remarkable in showing a residence on the upper floor, approached only from the street.

4. *The Atrium of the House of Sallust.*—This was the principal room in the house, some 25 feet high and 50 feet long. In the centre is the impluvium, with its fountain (now in the museum at Naples). It has aïæ at the sides, and through the tablinum are seen the columns of the pseudo-peristylum, having the further wall painted to represent a garden; a practice resorted to in all the smaller houses of Pompeii which had not room for a noble peristyle. The pavement is of black stucco, with white marble tesserae, which form lines to seven different vanishing points, including the perpendicular and horizontal.

5. *The Impluvium of the House of the Faun.*—This impluvium shows the famous bronze faun, from which the house takes its name. Behind the tablinum may be seen the double peristyle, one behind the other.

6. *The Peristyle of the House of the Faun.*—This is the largest house in Pompeii, and was enriched with costly mosaic pavements in nearly every room, the principal one representing the Battle of Issus between Alexander and Darius. Like several of the houses of Pompeii, the peristyle has an upper storey; but, unlike any of the others, it has a second peristyle, serving the purpose of a hortus, which may be seen behind the columns of the peristyle. It was therefore a magnificent house.

7. *The Lararium of the Peristyle.*—In the lararium of this part of the house the penates were generally worshipped, though in some houses they appropriated a separate room, so as to be more private, called

8. *The Sacrarium, House of the Questor.*—This example is quite perfect, and is the only room in Pompeii in which the ceiling has been preserved.

9. *The Triclinium with a pergula.* Here again the back wall is painted so as to make the peristyle appear more extensive. The columns are painted to represent mosaic work, winding round the columns in serpentine lines. These were formed by describing a circle at bottom of column, dividing it into flutes, and running these lines up; then forming horizontal circles all the way up, and drawing in the leaves at the intersections.

10. *The Mesaulos, or communication from one atrium to another, the further one being the atrium of a hospitalium, or suite of apartments for the reception of friends and visitors.*

11. *The Solarium.*—An imaginary view from the top of a house, looking down upon the roofs of other houses, and having Castellamare and Sorrento in the distance. The pergula, so common on roofs of houses in the wall paintings and in modern Italy, is supported on wooden columns, as represented in arabesque paintings.

12. *Origin of Arabesque Paintings.*—A view through a window-opening in Pompeii, which might have given the idea of wall-painting in three divisions; the side ones ornamented with figures, and the centre one opening with a colonnade, and people behind it.

13. *My house.*—The house of Marcus Lucretius, formerly called the Casa delle Suonatrice. It was excavated under my personal superintendence during four months in 1847. I desired that everything should be left as it was found, instead of being taken to the Museo Borbonico. This request was granted, and it is now one of the show houses on this account. The tablinum is interesting in showing recesses in the wall on either side for inserting paintings on wood, which Pliny says were always of greater merit, because of higher finish. The sinking for the clamps of the pannels are clearly seen.

14. *The Greek Theatre.*—This drawing is made from measurements and examination of various theatres in Asia Minor. The Greek theatre differed from the Roman in devoting the orchestra to dancing and music, and to the chorus, and in the corners of the theatre being open, thus giving a view of the country. They were more of a horse-shoe form, and were larger and more common than the Roman. The awning is supposed to be hung from a

large hook or ring, and run up in slips; while the ring itself was supported by strong ropes attached to lofty poles which ran all round the theatre. These theatres often held 45,000 people. That of Lyttus in Crete was 600 feet in diameter.

15. *The great hall at Karnac,* the columns of which are 13 feet in diameter.

16. *The Parthenon at Athens,* as restored by me.

17. *Ephesus.*—The city of Ephesus as viewed from the great theatre, showing all the public buildings in the heart of the city, and all the private houses on the hills. In front is the agora or forum, having a lake in the centre surrounded by a colonnade, and on the left the market-place. Behind the great agora is the great gymnasium.

18. *An aqueduct at Ephesus.*—This drawing was lost for many years, so that I could not include it in my book on Ephesus. At length it was discovered rolled up in a drawer, and crushed and bruised so that I was obliged to cut out the sky, and paint a new one on another sheet, which I pasted at the back, but which is scarcely seen. I mentioned this when I sent it to the Royal Academy, and it was consequently rejected, looking like a trick of art, to get greater effect. There are long inscriptions in Greek and Latin along the whole length, which are still visible, even in this drawing, giving the name of the donor.

19. *Pinara, in Lycia* view from the ruins of the theatre. In front is the site of the city placed upon a platform of rock, and behind it is the Acropolis perched high among the clouds, and the abrupt sides of which formed the necropolis of the city, being pierced with tombs in every direction.

20. *Myra, in Lycia.* Rock-cut tombs.

21. *Hierapolis.*—Petrified cascade. In the centre of the city is a spring of warm water, charged with lime. Being full of air, the water magnifies any object placed in it. Putting my foot in it, it appeared to be the foot of a colossal statue. As the stream flows through the city, the heavier portions of the lime sink to the bottom, while the lighter go to the sides. It thus gradually builds itself up like a stone wall, carrying the water to the edge of the plateau on which the city is built, and flows from it like a cascade. After many years, when its bed becomes level with the spring, it finds a weak point, and turns aside in another direction to form a cascade somewhere else, leaving the former cascade of stone perfectly dry. The only water visible is that in the centre of the small basins, after rain.

22. *"My tomb."*—A tomb I discovered in Lymyra in Lycia. It is in three steps, and the four horses' heads represent the quadriga of the deceased.

23. *Euromus, in Asia Minor,* a very picturesque ruin, which composes well from the contrast of the two angles.

24. *The city of Adalia, the ancient Attaleia in Pamphylia.* Morning effect.

25. *The river cataracts at Attaleia.*—Evening effect: so called from its falling into the sea in so many cataracts.

26. *Aiasalik, the ancient Ephesus.*—Mosque. The beautiful writing over door will be seen in detail in my "Ephesus."

27. *Aiasalik.*—Interior of the Mosque. It is all in ruins, and the pulpit was lying on the floor in fragments when I made the drawing.

28. *Aiasalik Cemetery.*

29. *Aleppo.*—Vizir Khan.

30. *Aleppo,* House at—

31. *Ballat, the ancient Miletus.*—Outside of Mosque. The capitals are remarkable as imitating stalactites; and the perforated slabs forming windows are interesting, as admitting light and ventilation.

32. *Ballat.*—Interior of the Mosque. It is now in ruins. The carpet is evidence of a puzzle, to find out a vanishing point for lines which are not given in the original drawing. It is the third carpet I "put down," the former ones "going up hill."

33. *Mylassa*, Medrassah at—

34. *Nicæa*.—Mosque with porcelain minaret.

35. *Adrianople*, Mosque at.—The lights and shadows have all been reversed since it was exhibited at the Academy; and the sky being mixed with oil spots had to be restored with crayons.

36. The Capella Reale at Palermo—all of mosaic.

37. Copy of a crayon copy of a painting by De Heim at the Louvre. The crayon drawing was so bad that I mistook the lemon which is in the original painting for an orange; after painting all the fruit from fruit bought at Covent Garden, and adding the butterflies, prawns, &c., I went to Paris, and then discovered the mistake about the lemon. A first attempt in oil.

38. An altar-piece at Lubeck, forming a triptych—a most wonderful sculpture, exhibiting a double scene and double tracery, one behind the other. In front is the Crucifixion, St. Veronica, and the soldiers casting lots; and behind are our Saviour carrying the cross, the centurion, and the Resurrection.

The frame once contained a copy of a painting by Titian, ordered by Charles I. His initials and crown are branded in at the back, and a parchment describes it as being one of ten such pictures.

Copy of writing on parchment at back of frame, written by Vanderdoort, Keeper of the King's Cabinet:—

9
hind shelf of his
Maj. Cab' room
Cubbards in y"
Wh. Hall, 1639
of 6 of 9

Extract from the Ashmolean Catalogue.

"Here followeth the fourth book of the King's limned pieces and pictures, being No. 10, that are kept in his Majesty's new erected Cab' room, within the cupboards at the present time at Whitehall, about 1639, whereof the ten limned pieces are in double shutting cases, with locks and keys, and glasses over them, the particulars thereof specified as follows:—

No. 9.

"The great limned piece, done upon the right light. Ninth, lying along a naked woman on her back, whereby the chamber afar off in a little waiting-room a woman kneeling, taking something out of a chest, another waiting woman coming after, bringing along a pillow, whereof my Lord Chamberlain hath the principal in oil colours, the limned piece being dated 1638.

"Size 6 inches by 9 inches."

B.—Mr. Vacher's Questions.

Mr. SYDNEY VACHER [A.] said his first question was: "Would the Council consider the advisability of omitting in future the words 'in Architecture' in the description of the Examination for qualifying as Associate, in the KALENDAR and all other places?" He observed that this had been done in the advertisements of the Examination in the press; and, as many members of the Institute disagreed with the Examination being designated an examination in Architecture, the omission of the words would please many and offend none. The second question was: "Did the Council consider the Royal Institute of British Architects an educational body?" The third question: "If not, the title to the map showing the United Kingdom divided into provinces issued in the first num-

ber of the new JOURNAL seemed incorrect and should be altered, and the words 'for examination' inserted in place of 'for educational,' so as to read: "'Map showing the divisions of the Provinces for examination and other purposes'; and would the Council see that an erratum to that effect was put in the next number of the JOURNAL?" He thought it wiser that it should be explained that it was for the help of their new qualification for Associates. Formerly it was merely the word of the members that was required. Now it was decided that was not sufficient, and the Charter had been altered to allow of an examinational qualification for an Associate being substituted. His fourth question was: "In view of the new regulation for the qualifications of Fellows passed last session, would the Council take into consideration the formation of a new class of members higher in grade than that of Associate, to admit those gentlemen in full honourable practice who had and who had not passed the Associates' examination, and who could not comply with the qualification for Fellows?" As he (Mr. Vacher) had formerly pointed out, it would be a great help to the Institute if a new class were created as suggested. His fifth question was: "With regard to the second resolution passed at the Liverpool Conference last year, referred to in the Presidential address, was it by coercion that the Council of the Southern Province—viz. the Institute—hoped to absorb within its centre those architects of repute and their following of young men and sympathisers who had presented a Memorial to the Institute which had been disregarded?" He considered that the gentlemen who backed up the Memorial with their names were some of the most advanced among English architects, and that their opinion on examination should have great weight with the Institute, even though they were not members. The sixth question was: "If not, by what means did the Institute hope to attain that end?" always bearing in mind that they had that Memorial against the Examination before them. The seventh question he put because the Presidential Address conveyed the idea that the Architectural Association was either in alliance, or contemplated alliance, with the Institute: "Was it a fact that the London Architectural Association was not in alliance with the Institute, and had no present intention of any such alliance?"

THE PRESIDENT said he would endeavour to answer Mr. Vacher's questions as briefly as possible:

As to Question 1. Seeing that the examination, in their opinion, if it were an examination in anything at all, was an examination in architecture, it would be a distinct error and misleading to assign to it any other name. Until valid reasons were brought before the Council for an alteration, it was not proposed to make any alteration.

As to Question 2. The Institute was not a teaching body, and had never assumed to be so; but, looking to the results of the policy which the Institute had for many years followed, seeing that it had done more to encourage and foster the education of young architects than any step which, so far as he was aware, had ever before been taken, it was in the highest and fullest sense of the word an educational body.

As to Question 3. The heading on the map was correct; it was a map dividing the United Kingdom into certain architectural provinces for educational purposes. One of the principal motives was to bring into active organisation the educational facilities that existed at various local centres, to encourage and foster them, and so to promote the education of the young architects throughout the country. To alter the heading of the map as proposed would be an *erratum* which would require to be corrected.

As to Question 4. In view of the new regulation for the qualifications of Fellows passed last session, he ventured to say it would be most unwise to make the suggested

alteration. Until the new regulation had been tested by experience it would be premature to make further alterations.

As to Question 5. In writing the paragraph referred to in the Address, the President explained that it was not a reference so much to the Royal Institute as to the various Allied Societies. Certainly it was not by coercion that they should hope to bring into the Institute the gentlemen referred to.

As to Question 6. The word "hope" was hardly the term to use after the experience they had had. It was the desire of every one connected with the Institute to see men whom they all acknowledged as distinguished and able architects, members of the Institute. It was right to add, however, that when the Memorial was presented, the Council invited the Memorialists to discuss the matter with them and thrash it out. The invitation was declined. He (the President) had more than once declared that nothing would give him greater pleasure than to see those gentlemen, instead of remaining outside and criticising the Institute's well-meant efforts for the advancement of architecture, come among them and join them, and help them in such efforts. They could only express regret that such invitations and such cordial expressions of goodwill had so far been disregarded. Mr. Vacher had said that the Memorial had been disregarded by the Institute. Most emphatically he would say that that Memorial was not disregarded; it was carefully considered, and the gentlemen who signed it were asked to come and discuss it. [Mr. Vacher, interposing, said he wished rather to imply that the advice was disregarded.]

As to Question 7. If Mr. Vacher had referred to the By-laws, he would have seen that the Architectural Association (London) was not qualified to become an Allied Society, alliance being confined to any "non-Metropolitan Architectural Society." Members of the Institute and of the Association, however, were unanimous in thinking that the objects of both Societies would be best served by perfectly independent action. The Association was essentially a teaching body, and if the Institute were to attempt to become so in any form it would only injure the work being done so admirably by the Association. The President was glad to take the opportunity of expressing his hearty satisfaction in regard to the thorough and perfect goodwill and good feeling that existed between the Institute and the Architectural Association.

C and D.—Mr. Woodward's Questions.

Mr. WM. WOODWARD [A.] wished "to direct attention to the delay on the part of the Institute in completing the revised Conditions of Contract." Referring to the fact that a period of nearly seven years had elapsed since the first consideration of this subject, he stated that on the occasion of two or three Annual Meetings he had called attention to the extraordinary delay which had occurred, and had been informed by the Hon. Secretaries of the Practice Committee that the subject was one of great difficulty, requiring very delicate handling, and that the negotiations with the Builders had to be carried on with such regard for their sensibility and sensitiveness that it would be impossible to devote too much time to the furtherance of this object. He (Mr. Woodward) trusted that no final agreement would be come to with the Master Builders, or the subject be finally settled in any way, until each member of the Institute had had a draft copy sent to him for criticism and observation.

Mr. EDWIN T. HALL said that formerly he had taken a very active part in the matter, and was still doing so. He thought the question was a perfectly reasonable and legitimate one, and he could assure Mr. Woodward that every effort had been made to bring the matter to a climax years ago. The great difficulty had been that it was not a revision of Conditions, but it was abso-

lutely a new set of Conditions. Those who had had trouble under the present set of Conditions knew that, once they got into trouble with the builder, the latter could drive a coach and horses through the document in numerous places. The Committee had therefore endeavoured to frame a set of Conditions which should be practicable, and just as between architect and builder and client. The Conditions had been settled by the Committee at least three years ago, and were sent to the Institute of Builders, with whom they remained, to the best of his recollection, for twelve months. When returned, however, they had been so entirely altered as to be practically a new set, and framed, as the Committee thought, a great deal too much in the Builders' interests. The Committee then made a revision, taking the suggestions of the Builders' Institute where it was right and honourable that they should, and dissenting from them where it was right and honourable they should dissent. The Builders' Institute had, very naturally, looked at the matter from the builders' point of view. The Committee, however, had not studied the architect's point of view only; they had had a third person to consider who was not represented either by the Institute of Architects or the Builders' Institute, and that was the client. They wanted a document that the client's solicitors would say was sound and right to protect them. They wanted to protect the architects and also the builders from exactions on anybody's part. It had taken a long time to debate that *pro* and *con*; but, at length, they had so far got the Builders' Institute to take their view, that he thought he was right in saying that everything was agreed except the verbiage of two clauses—the Arbitration clause and what was commonly known as the Bankruptcy clause. Fourteen months ago a Committee of leading members of the Council of the Builders' Institute met five members of the Practice Committee, and, in principle, everything had been agreed to. But the great difficulty since then had been to get the solicitors to accept the decisions then arrived at. He was sure it would strengthen the hands of the Committee if the Meeting would fix a time for settlement; he hoped, however, that in two or three months they would be able to settle it. No document, of course, could be issued by the Institute as an Institute paper until it had been submitted to a General Meeting; and he thought the Council would decide that a draft should be published before it was debated by the Institute. When the matter was debated, the gravest consideration should be given to it; and if it was a sound, workable, and just document, it should be passed.

Mr. WM. WOODWARD [A.] then proceeded "to invite attention to the practice of some district surveyors in allowing building works to be proceeded with, which works they have determined are in contravention of the Building Acts, and in declining to take the required legal action until such works are completed, thereby entailing serious loss and inconvenience on the part of building owners, architects, and builders." A builder submitted drawings in the usual way to the district surveyor; the district surveyor came to the conclusion that there was an irregularity in the building as designed by the architect; the architect entertained an entirely different opinion, and, in order that his client might not be put to the expense of altering the building thereafter, invited the district surveyor to at once bring the subject before a magistrate, so that the point in dispute might be settled. In two cases within the experience of Mr. Woodward where the architect had suggested such a course, the district surveyor had declared that it was useless, as the magistrate would not entertain the matter until the contravention had been consummated. The architect was thus placed in a dilemma. He had the risk of the magistrate's adverse decision hanging over his head; he must go on with the building; and the district surveyor declined to have the point settled. To bring the matter to an issue,

if the Meeting approved, he would suggest that representations be made to the District Surveyors' Association that it was the opinion of the Institute that in cases where an architect suggested to a district surveyor that he should bring a disputed point before the magistrate, the district surveyor should at once comply with the request. A second and more preferable course, if the Meeting approved, was to send notice to the London Council, stating that, in the opinion of the Institute, the subject should be dealt with in the Consolidation Act the London Council were preparing, and that, in the event of an architect submitting in writing a notice to a district surveyor that he desired that any disputed point should be brought forthwith before a magistrate, the district surveyor should comply with his request.

Mr. WYATT PAPWORTH [F.] asked if it would not be better that the County Council should send the matter to the Appellate Tribunal, where it would come before men having practical knowledge.

Mr. TAVENOR PERRY [A.] asked if it would not be better to have the definition so fixed that they could all understand what the Act meant, instead of requiring a tribunal to appeal to at all.

Mr. EDWIN T. HALL [F.] submitted that Mr. Woodward had answered his own question. How could a magistrate decide on anything except a breach of the law? There was no matter to go before a magistrate until there was a breach of the law, and the law had not been broken until something had been done contravening the Building Acts. He thought Mr. Woodward's object would be gained if, in the revision of the Building Acts, which the Institute had undertaken, they were to put in the suggestion as one of the points which they recommended should be included in any amending Act, so that there should be a means of arriving at a decision on the drawings, and thus obviate difficulties which constantly arose.

Mr. WOODWARD [A.] said that that would be the proper course to pursue, and would meet his views.

THE PRESIDENT said that, no doubt, the Council would consider the matter with a view to finding some solution to obviate the difficulty pointed out.

PROCEEDINGS OF ALLIED SOCIETIES.

YORK: ANNUAL MEETING.

On the 22nd ult. the twelfth annual meeting of the York Architectural Society was held, under the presidency of Mr. W. Hepper, and the annual report read by the Hon. Secretary, Mr. A. B. Burleigh, in which it was announced that the Royal Institute had, under the terms of their Charter, added York to the list of Allied Societies and made the city a local centre. Under the terms of alliance the Royal Institute of British Architects required Members and Associates of the York Society to allow themselves to be placed under the honourable obligation of signing a declaration prohibiting the acceptance of trade discount commissions or allowances, the purport of which declaration was the same as that contained in the Charter of the Institute. In making this announcement the Hon. Secretary congratulated the members upon having made an advance towards the attainment of a higher standard of professional practice, and one which should commend itself to the notice of architects within the York province. The Treasurer's report was a satisfactory one, as, although the expenditure for the past year was large, there yet remained a balance in favour of the Society.

SHEFFIELD: MONTHLY MEETING.

On the 28th ult., at the monthly meeting of the Sheffield Society of Architects and Surveyors, Mr. E. M. Gibbs [F.], President, in the chair, a Paper was read by Mr. H. W. Lockwood on "Architectural Practice in America." After a

short sketch of the history of architecture in the States, an account was given of the present method of training for the profession, which was in the main characterised by the substitution of the student in an academy for the pupil in an office. The extent to which the speed demanded from everybody in the States had affected the practice of architecture was shown by a life-like sketch of every-day work in a New York office, with its division and subdivision of work, this departmental system giving speed at the expense of interest. Quantities were seldom, if ever, supplied. In very few cases was a clerk of works employed. In consequence of the extra work entailed by that and some of the legal conditions surrounding the profession, and, to a minor extent, by the absence of the pupil, the expenses of an office in the States were much heavier than in Great Britain. . . . The Paper closed with a notice of Richardson and his work, and an appreciative criticism of the American architecture of to-day, finding in it the defect, especially in church design, of a want of the feeling of reverence, and of an appreciation of the poetical. These, however, would come with experience, and the strength and originality of the work of young America gave sufficient guarantee that these wants would in time be well supplied.

NORTHERN: OPENING MEETING.

On the 29th ult. the opening meeting of the session of the Northern Architectural Association was held, when an Address was delivered by the President of the Association, Mr. J. H. Morton [F.]. Quoting from Mr. Macvicar Anderson's Address to the Institute on the 6th ult., that "architects have been sometimes reproached with incapacity because they fail to attain an ideal which the public chooses to establish," and because they have "not created a new style of architecture," Mr. Morton went on to say that as they existed in a great measure by the approbation and support of the public, it was obvious that for business reasons they were obliged in some measure to consider its criticism. But though this proposition might hold good in a limited sense, they must not forget also that there was criticism and criticism. It was not for them to submit meekly and blindly to the dictation of vulgar and captious censorship. . . . In deferring to public criticism they must be satisfied that the counsel given was just, and the product of a cultivated mind competent to instruct; that while no man should consider himself above the help of criticism, the latter must proceed from the well informed, who had mastered something more than a feeble smattering of the art of architecture, and who were qualified to judge of excellences, to point out shortcomings, or suggest improvements.

In modern times one style after another had passed into vogue, and, like everything which was the result of ephemeral fashion, had after a while been almost, if not altogether, discarded, without leaving any deep or lasting impression on the national architecture. It was admitted that the exclusive study of any one style was apt to result in mere servile imitation, which was so injurious to art. Therefore it was the mind drawing its inspiration from every source which was the best capable of producing, through the process of its crucible, great and original results. The true mark of progress in the present day was that, generally speaking, they were students and patrons of all styles; and this practical freedom, together with the requirements and inventions of the age, was perceptibly changing the expression of their architecture, and giving it, so to speak, a kaleidoscopic variety and a character of its own. . . .

They were told that the mutual feeling of confidence and interest which formerly existed between employer and workmen had, in a great measure, disappeared, and that some of the regulations of the trade unions had a tendency to bring down the best workmen to the standard of the average, and to grind them down to a dead level. The

subject naturally bristled with difficulties; and he (Mr. Morton) was aware that in treading on that ground his feet were striking the treacherous surface of Labour and Capital problems, and skirting dangerously the pitfalls of an intricate and as yet imperfectly grasped system of social and political economy. He thought, however, it might be acknowledged that the causes he had alluded to, combined with the decline of the apprenticeship system, had resulted in increasing the difficulties of architects, as well as contractors, in the execution of satisfactory workmanship. The rapid improvement in machinery, together with the fact that some employers were unwilling to take apprentices, may have had some influence in changing those conditions. It was stated at one of their meetings last session by a much respected tradesman connected with one of the more decorative branches of the building trade, that he was one of the few, if not the only employer in their city who took apprentices in his own particular trade. It had also been alleged that trade unions set their faces against apprenticeships to a large extent, and that in many cases the men felt that where apprentices were taken they (the men) taught them their trade for the benefit of the employers, and thus enabled the youths to enter into unfair competition. It was expected by many that technical education would be the compensating medium for some of these changes or defects. It must be allowed, however, that no trade could be properly learned out of the workshop; although the men would certainly understand better the instruction given in the workshop if they had had the benefit of a theoretical foundation before proceeding to practice. It was useless to expect the technical school to entirely replace the apprenticeship system; but, having laid the foundation before entering the workshop, the technical education of the artisan might go on contemporaneously with the workshop employment. Many workmen of excellent practical skill worked entirely by rule-of-thumb, and their efforts would assuredly prove more successful if guided by the enlightenment and precision of scientific knowledge. Thus technical education might be the means of exalting labour, and of enabling capable workmen to raise themselves to a higher standard by the acquisition of a more perfect knowledge of the art of building in all its details in relation to architecture. . . .

Although it was well known to most of the members that their Association was in alliance with the Royal Institute, it might not perhaps be so well known that the counties of Northumberland and Durham had recently been allotted to the charge of the Northern Architectural Association, whilst the counties of Cumberland and Westmoreland, formerly in the province of the Northern, had been assigned to the Manchester Society. In the Institute JOURNAL of November 9th it was urged that a little activity on the part of the officers of each of the Societies allied to the Institute might suffice to enrol all the architects residing within their territory; and it was further mentioned that one-fourth of the subscription of Associate members of the Institute was returned towards their subscription to the Allied Society with which they were also connected, and that therefore the annual extra amount was small. In the case of a Fellow the subscription to their Association became nothing at all, as it was paid by the Institute. The majority of the gentlemen connected with the Institute in the two counties in the province of the Northern Association were members of the Association. There were, however, four Fellows and six Associates that were not so; but it was hoped they would be induced to join. It might be well to mention that the Presidents of the six Allied Societies that had the greatest number of subscribing members of the Institute were to be nominated for seats on the Council, and if the ten gentlemen alluded to could be persuaded to join, there seemed no reason why the Association should not have that additional link with the Institute. With a view of still further increasing and sus-

taining the influence of the Association, the committee hoped to arrange a conference of architects and students in Sunderland early next year, and to lay before the meeting the rules, library catalogue, syllabus of lectures, visits to buildings, and other advantages in connection with the Association, with the hope of inducing more architects and students in that district to join them. The Association had now existed for thirty-five years, and the roll in the last annual report stood as follows:—Members 31, Associates 42, Students 22, total 95. It now numbered—Members 33, Associates 44, Students 29, total 106, an increase of 11 in six months. But a much larger number of students were needed in order to arrange for the services of a special Professor of Architecture in connection with the Durham College of Science. It would be remembered that a curriculum of study was drafted by the Committee, and approved by the Principal of the College, and issued last year. Dr. Garnett, however, shortly after was called away from the district, and it seemed that the matter must remain in abeyance till such time as further arrangements could be made with his successor. If the subjects indicated in the curriculum, however, were strictly adhered to and persevered in, the education of their students might go on without interruption. The memory, more or less, of every student needed cultivation. Reading would do this, but it must not be rapid and superficial to be productive of permanent benefit. An invaluable aid to study was the Library of the Association. Books had been purchased selected entirely from the list recommended to students by the Royal Institute, and they were now in possession of the nucleus of a library already worth from £50 to £100. . . .

Many of their members, unfortunately, were not seen at the meetings as frequently as could be wished. . . . They consequently missed those agreeable intimacies and friendships that had been formed in the Association, and which tended towards its success and the regard the attending members had for it. The committee had decided that in future the rule "That every gentleman on his election shall be required to sign his name, agreeing to conform to the rules, in a book provided for that purpose" should be fully observed. . . . In future the roll-book would be on the table at all indoor meetings. New members would be expected to attend the first possible meeting after their election, to sign the same.

The question of competitions had from time to time occupied the attention of the committee, and the occasion should not be allowed to pass without noticing the general result, as they seemed on the whole to have been decided fairly and justly. Professional assessors were now generally recognised in the district as necessary to a just decision, and where one was appointed they should always, as far as possible, uphold and maintain his award. It was only where they feared the result was arrived at in bad faith, and the integrity of the committee was suspected, that their interference was necessary, and this would ever be found to be on behalf of the interests of their art. . . .

PARLIAMENTARY.

Height of Buildings in London.

The Council have received the Report, which is given below, from the Practice Standing Committee, and, prior to taking it into consideration, have ordered it to be published. The Report is as follows:—

The Practice Standing Committee have had under consideration the special Report of the Building Act Committee of the London County Council, dated 26th October 1893, containing the following proposed clauses:

- (a) That existing buildings should not be raised or extended so as to contravene the provisions of the Bill as to height and open space in front which are

applicable to new buildings, or where they already contravene such provisions, they should not be raised or extended so as to make matters worse.

The next recommendation was designed to meet a grave defect in the existing law, whereby the Council had practically no control over such buildings as blocks of artisans' dwellings not fronting any street, but inclosed in a courtyard exclusively belonging to them.

(b) That domestic buildings not abutting upon any streets shall be subject to restrictions as to height and open space about them similar, *mutatis mutandis*, to those to which buildings abutting on streets are subject.

As regarded the difficulty of setting back buildings in old streets, or on old foundations, they thought the setting back should be compulsory; and as regards the public convenience, there was no sufficient reason why the public should not pay a fair price for what it required. They therefore recommended:—

(c) That buildings erected anew upon old foundations shall, unless the Council otherwise allow, be subject to the same restrictions of height as new buildings upon new sites.

(d) That buildings erected anew upon old foundations, or erected in old streets, shall, unless the Council otherwise allow, be set back at the same distance from the centre of the road as applies to new buildings erected on vacant land, but that in their case the owner shall not be compelled to give up to the public way the land so left free from buildings.

It was becoming more and more the practice to erect large blocks of buildings which entailed certain peculiarities of construction. Amongst others, it was often found necessary to light many of their rooms by internal areas or courtyards; therefore they recommended:—

(e) That provision be made for the adequate ventilation of internal areas or shafts, constructed with a view to providing light and air to rooms in domestic buildings, and for regulating the dimensions of the same.

As the law stood at present, the Committee often found itself in a difficulty as to new streets; therefore they recommended:—

(f) That it should be an offence to lay out any new street without the sanction of the Council in writing.

(g) That in cases arising in the administration of the Building Act, the Council should have power, under proper safeguards, to close or divert useless roads, paths, or rights of way.

(h) That the Council be empowered to frame by-laws to regulate lamps, signs, or other things attached to houses and overhanging the public way, such by-laws to be enforced by the vestries.

The Practice Standing Committee are of opinion that most of the proposed regulations will, if carried into effect, provide satisfactory and necessary additions to the powers of the London County Council, and, as such, consider that the Royal Institute should give support to them generally in principle. But there are some points connected with some of the proposed regulations upon which misconception appears possible.

With reference to the proposed regulations (a), (b), (c), and (e), the Practice Standing Committee consider these to be satisfactory and desirable.

As to (d)—If the intention of this regulation is rightly understood by us, it would appear to be open to very grave objection, as giving power to the Council in some cases to take the whole of a man's property without compensation, and in many others to render building sites valueless as soon as the buildings standing on them are pulled down. This regulation would thus act, not as intended in aid of

improvement, but, on the other hand, would lead to old buildings being maintained or reconstructed piecemeal, at great cost, without the sanitary and other advantages to be obtained by rebuilding. To give two instances of the manner in which this regulation might be applied. At present a building is being erected on the site of a previous one at the corner of Dean Street and High Holborn. The frontage to Dean Street is about 56 feet, the depth about 16 feet. Dean Street is only 14 feet 6 inches wide. If the powers proposed to be exercised were enforced in this case, in order that Dean Street might be widened to 20 feet from its centre, 12 feet 9 inches would have to be taken from this site for the whole length of its frontage to Dean Street, thus leaving available a site for building with a frontage of only 3 feet 3 inches to Holborn, and a return frontage of 56 feet to Dean Street. Even if only 4 feet were taken, as suggested in the report of the Building Act Committee, the site would be rendered so useless by itself that the owner of the adjoining premises would be the only person for whom it would have any value, and he would probably be able to obtain it at his own price.

The second example is this. In Portsmouth Street, close to King's College Hospital, one of the streets which will probably require to be widened in connection with the new street from the Strand to Holborn, stands an old and dilapidated public-house which projects considerably beyond the present general line of frontage. It has a frontage to Portsmouth Street of about 45 feet; at each end are narrow thoroughfares. If the proposed powers were enforced in this case, and the thoroughfares in front and at each end were widened to 20 feet from their centres, the owner would find himself left with a useless site available for building only of about 10 feet by 7 feet, and this without any compensation.

It is, of course, to be presumed that the County Council, if they possessed the proposed powers, would desire to exercise them in a just and equitable manner; and even if not compelled to do so, would wish to allow compensation in such cases as the above. But it does not appear that they would have any power to do this.

The proviso that the land not built on shall not be thrown into the public way would merely leave a number of forecourts or waste spaces, of little or no advantage to the public, or the owners of the properties rebuilt behind them.

The powers under which the Commissioners of Sewers in the City of London are enabled to acquire either whole sites or portions of them for the purposes of public improvement in cases of rebuilding are believed to have acted equitably to the owners of property, and satisfactorily to the public. It is therefore suggested that the requirements of the case might be met if similar powers were conferred on the London County Council.

(f) If it be intended to enact that it is to be an offence to lay out a road otherwise than in accordance with the regulations of the Council and the Acts of Parliament relating to such matters under which they act, there can be no objection to this clause, provided that in cases where approval is refused the grounds of such refusal are stated. But, if it be intended to go further, it would appear to be an interference with the right of every man to develop his own property, provided he does so in accordance with such regulations as may have been made in the public interest. Any owner of a house or land should be allowed to rebuild the one or lay out the other for building, subject to such regulations as are of a definite character, of general application, not liable to frequent variations, and particulars of which should always be readily obtainable by any person interested in them.

(g) This is considered a useful and valuable regulation.

(h) This also is thought desirable, and it is suggested that all things of a nature similar to those enumerated, attached to houses whether they overhang the public way or not, might profitably be subject to control in the manner described.

